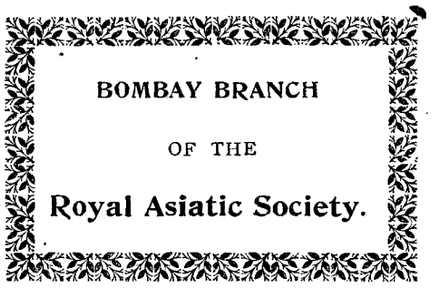
ADMINISTRATION REPORT,
MADRAS.

1915-16.

00134053



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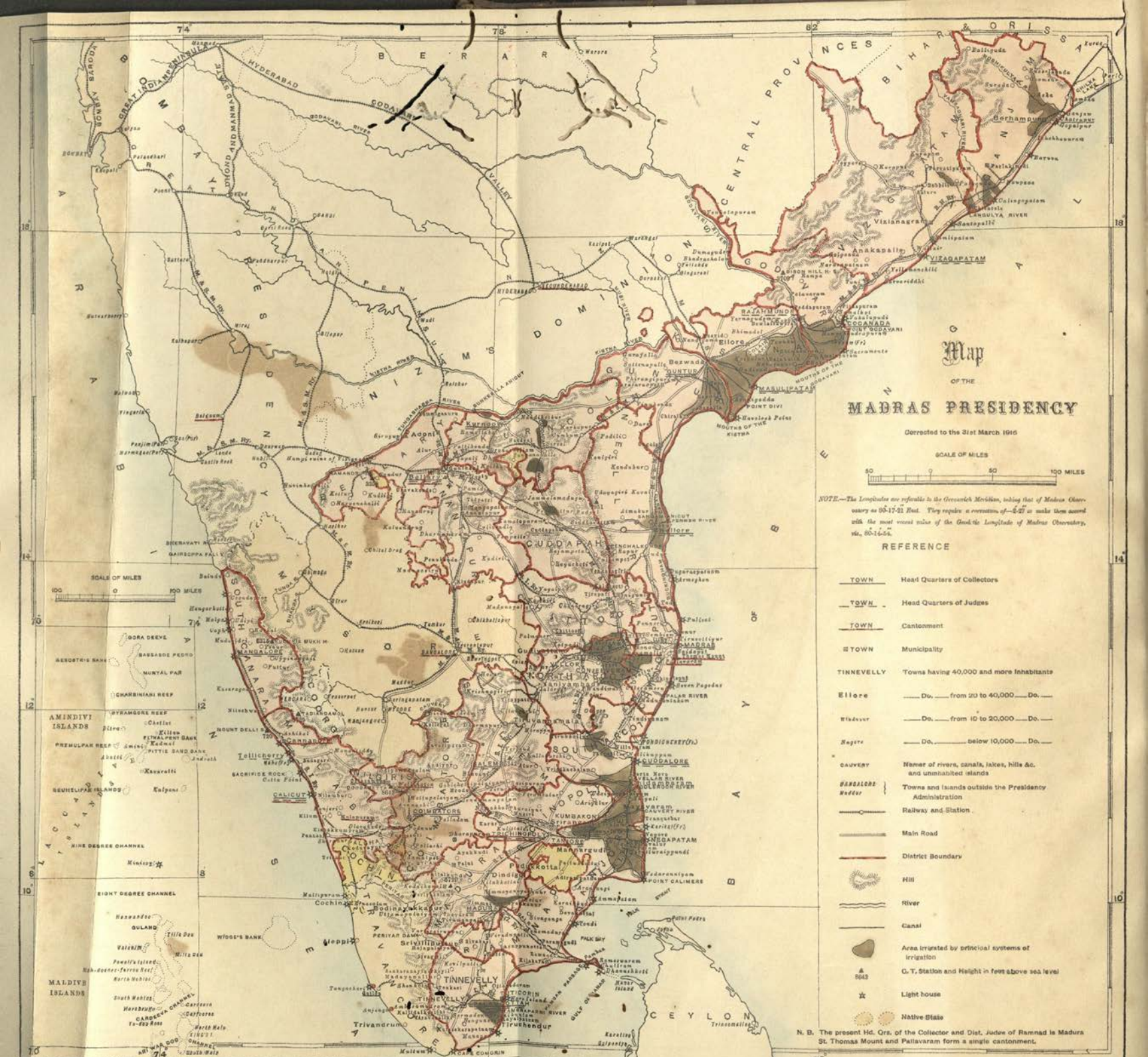
Map
OF THE
MADRAS PRESIDENCY
Corrected to the 31st March 1916
SCALE OF MILES
50 0 50 100 MILES
NOTE.—The Longitudes are referable to the Greenwich Meridian, taking that of Madras Observatory as 80°-17'-21" East. They require a correction of—4·27" to make them accord with the most recent value of the Geodetic Longitude of Madras Observatory, viz., 80°-16'-56·73".
REFERENCE
TOWN Head Quarters of Collectors
TOWN Head Quarters of Judges
TOWN Cantonment
TOWN Municipality
TINNEVELLY Towns having 40,000 and more Inhabitants
Ellore Do. from 20 to 40,000 Do.
Vizagapatam Do. from 10 to 20,000 Do.
Nagore Do. below 10,000 Do.
CAUVERY Names of rivers, canals, lakes, hills &c. and uninhabited islands
BANGALORE Madras Towns and Islands outside the Presidency Administration
Railway and Station
Main Road
District Boundary
Hill
River
Canal
Area irrigated by principal systems of irrigation
5043 G. T. Station and Height in feet above sea level
Light house
Native State
N. B. The present Hd. Qrs. of the Collector and Dist. Judge of Ramnad is Madura St. Thomas Mount and Pallavaram form a single cantonment.
BAY OF BENGAL
ARABIAN SEA
CEYLON
BERAR
CENTRAL PROVINCES
BIHAR & ORISSA
HYDERABAD
MYSORE
COORG
TRAVANCORE
COCHIN
PUDUKKOTTAI
GODAVARI RIVER
KISTNA RIVER
PENNAR RIVER
PALAR RIVER
CAUVERY RIVER
VAIGAI RIVER
TAMBRAPARNI RIVER
PAMBAN
GULF OF MANAAR
PALK BAY
MALDIVE ISLANDS
LACCADIVE ISLANDS
Vizagapatam
Rajahmundry
Ellore
Bezwada
Masulipatam
Cuddapah
Kurnool
Nellore
Madras
Pondicherry (Fr.)
Cuddalore
Salem
Coimbatore
Calicut
Mangalore
Tellicherry
Cochin
Tinnevelly
Trivandrum
Negapatam
Tanjore
Trichinopoly
Madura
Ramnad
Pudukkotta
Dindigul
Periyar Dam
Palghat
Anaikadalli
Vizianagram
Berhampur
Chicacole
Coconada
Narsapur
Bandar
Kalahasti
Tirupati
Cumbum
Adoni
Bellary
Hospet
Chitaldrug
Shimoga
Hassan
Kadur
Mysore
Seringapatam
Nilgiri Hills
Ootacamund
Coonoor
Wellington
Kotagiri
Kollegal
Erode
Karur
Dharapuram
Udumalpet
Pollachi
Palni
Kodaikanal
Periyakulam
Dindigul
Madura
Tirumangalam
Virudhunagar
Sivaganga
Manamadura
Ramnad
Rameswaram
Mandapam
Tuticorin
Tinnevelly
Palamcottah
Srivilliputtur
Sattur
Kovilpatti
Tiruchendur
Nagercoil
Cape Comorin
Aramboly Pass
Ghat Road
Kumbum Pass
Gudur
Kavali
Ongole
Guntur
Tenali
Repalle
Narsapur
Cocanada
Samalkot
Peddapuram
Tuni
Chicacole
Parlakimedi
Berhampur
Gopalpur
Russellkonda
Jeypore
Koraput
Vizianagram
Anaikadalli
Vizagapatam
Bimlipatam
Yellamanchili
Narsipatam
Polavaram
Rajahmundry
Ellore
Bezwada
Masulipatam
Nellore
Gudur
Kavali
Ongole
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REPORT

ON THE

ADMINISTRATION

OF THE

MADRAS PRESIDENCY

DURING THE YEAR

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1915-16.

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INTRODUCTION.

THE report on the Administration of the Madras Presidency for the year 1915–16 follows the same lines as the reports of previous years. The standing information contained in the red letter chapters of the report for 1911–12 is only referred to in the present report. At the head of each article in Part II the period to which it relates has been mentioned, and wherever the information given in Part I does not refer to the official year 1915–16, the period to which it relates is given in the margin. The references in italics in the margin of Part I are to the corresponding portions of Part II.

PART I.

GENERAL SUMMARY.

PART I.

GENERAL SUMMARY.

I.—GENERAL AND POLITICAL.

General.

1. The year 1915–16 was not marked by any striking or notable events in the Madras Presidency, nor were there any changes in the personnel of the Executive Government. Like other parts of the British Empire, this country lived under the shadow of the great war and paid toll both in men and material to help the common cause of the Allies. With this end in view, expenditure was cut down as far as was compatible with the exigencies of the administration and many schemes had necessarily to be postponed, whether for building new railways to open up the resources of the districts, or for water and drainage works to improve the public health in the larger towns. The effect of the war was seen in many ways : in the continued deficiency in tonnage and the contraction of foreign and coasting trade ; in the falling off in the deposits at the Post Office Savings Banks and in the circulation of currency notes ; in the check on railway earnings and in the set-back received by those departments which were engaged in developing the country by popularising the use of machinery. But, on the whole, the year showed a marked recovery from the unfavourable conditions which immediately followed the outbreak of the war. Steps were taken to remove from the districts all hostile aliens, and in the absence of any repetition of such raids as those of the *Emden*, public confidence rapidly recovered. Further, the Presidency being in the main agricultural, it waits upon the seasons rather than upon international politics and so the great recovery from the depressing conditions of the previous year was rendered possible, even though the war continued. The rains were generally good and the grant of remissions in some districts was due to excess of rain rather than to drought. The area under cultivation increased and as the prices of the staple food-grains did not fall, the agricultural population was thriving. The gross revenue increased by nearly Rs. 100 lakhs and the surplus at the end of the year was Rs. 1,082 lakhs. Perhaps the least satisfactory feature of the year was the great increase in civil litigation, which, combined with the tendency for the trial of suits to become more and more contested, suggested that the people are becoming increasingly litigious. The increase in grave crime is also an unfavourable symptom, though to a certain extent it may be due to the fact that people are abandoning the old method of compounding quietly with thieves and are looking

to the police force for help, and that therefore crimes are reported and registered which were formerly hushed up. The Government in their turn were doing their utmost to make the police force worthy of its vocation, both by improving the pay and prospects of the lower ranks and by endeavouring to attract more educated men to the posts of Deputy Superintendents and Sub-Inspectors. Education made steady steps forward ; there were no striking achievements to record in the year, but the number of schools and of pupils increased and the school accommodation was greatly improved. The year was marked by a considerable increase in political agitation, conducted on novel lines. These were frankly racial and every effort was made by distortion of history as well as of contemporary facts to stir up ill-will against the Government and against the European community. Fortunately the good sense of the people generally condemned these violent attacks, but a movement so conducted must continue to be a serious source of danger and to have a bad effect, especially on the student population.

War Funds. 2. Since the outbreak of the war voluntary subscriptions have been solicited in this Presidency for various relief funds. The two original funds were the Imperial Relief Fund and the Madras War Fund, the latter being under the presidency of His Excellency Lord Pentland. The collections under the Imperial Relief Fund during the year 1915–16 amounted to Rs. 1,24,880, and of this money 75 per cent was duly remitted to the Central Committee and 25 per cent was retained by the Provincial Committee for the relief of distress arising locally from the war. Other funds were also organized by the *Madras Mail*, and the several collections were : Belgian Relief Fund Rs. 1,04,944, Serbian Relief Fund Rs. 21,302, Madras Aeroplane Fund Rs. 22,652, Blinded Soldiers and Sailors Fund Rs. 13,079, and Belgian Children's Fund Rs. 4,331. In August 1915, the South Indian Planters War Fund was started with the object of assisting planters and members of west coast towns connected with planting who were disabled by the war or the families of those who were killed ; the fund is managed in London and considerable collections have been made. The Madras War Fund was started on 11th August 1914, to give help to British and Indian troops at the front. Efforts were concentrated this year on the maintenance of the hospital ship *Madras*, which made her maiden voyage on 17th November 1914 ; subsequently she made seven voyages to Basra, three to Suez, three to Mombasa, three to Shatt-el-arab and one to Alexandria ; she has carried up to date 333 British and Indian officers and 7,141 British and Indian rank and file. In February 1916 a river hospital ship was also equipped and staffed from the funds at a cost of Rs. 65,000 approximately, and from time to time grants of money were made for the use of troops and hospitals at the front. The War Fund has been maintained throughout by voluntary subscriptions, which up to 31st March 1916 amounted to Rs. 39,27,472. To supplement the work of the fund a Ladies' Depot was formed with 73 local centres throughout the Presidency ; from these centres a continuous supply of warm clothing and other comforts was received and forwarded through the St. John Ambulance Association and other agencies. The depot also provided two complete fifty-bed units for the Secunderabad Hospital and three fifty-bed units and 104 ten-bed units elsewhere.

3. During the year 1915–16 His Excellency the Right Honourable the Lord Pentland, P.C., G.C.I.E., Governor of Madras, made four tours, viz., X, XI, XII, XIII. From the 19th to 24th April 1915 His Excellency made informal visits to Kotagiri, Ubbathalai, Kolacambai, Kateri, Susgundi, Naduvattam, Gūdalūr, Devashola and Kargudi in the Nilgiri district. At Kōtagiri and Kolacambai His Excellency visited the Local Fund Hospitals and tea estates, and at Kateri the Power House attached to the Cordite Factory. At Susgundi the Toda School was visited and at Naduvattam the Cinchona Factory. At Kargudi His Excellency inspected the captured elephants. On his tenth tour which commenced on the 14th July 1915, His Excellency visited the Chittoor, Kurnool and Cuddapah districts. At Chittoor His Excellency received and replied to addresses from the District Board and the District Congress Committee and presented the Sanad of Rao Bahadur to M.R.Ry. B. C. Raghavayya Avargal. Besides visiting the local institutions His Excellency received a deputation from the residents of Chittoor and presented certificates of St. John Ambulance Association Life Membership to the Zamindar of Punganūr, the Mahant of Tirupati and a few others. From Chittoor His Excellency proceeded to Madanapalle via Palmanēr and Punganūr. At Madanapalle His Excellency received an address from the inhabitants of Madanapalle sub-division, and opened the Theosophical College and the Tuberculosis Sanatorium. Chendragiri was next visited, where the ryots presented His Excellency with an address. Tirupati and Tirumalai were also visited from Chendragiri and at Tirupati His Excellency received addresses from the Municipal Council and the Ratepayers' Association. Kurnool district was then visited. At Kurnool His Excellency received addresses from the Municipal Council and the District Board, visited several institutions of local importance, laid the foundation stone of a Girls' School, and opened the Town Hall. From Kurnool His Excellency proceeded to Banganapalle, where official visits were exchanged between the Nawab and His Excellency. Besides attending the State lunch given by the Nawab, His Excellency laid the foundation stone of the hospital and visited the Weaving and Silk Factories. His Excellency also visited Nandyal, where he received addresses from the Municipal Council and the People's Association and visited the Municipal Hospital and S.P.G. Mission institutions. At Cuddapah also His Excellency received addresses from local bodies and inspected several institutions of importance. From Cuddapah His Excellency proceeded to Proddatur, where he received an address from the residents and opened the Coronation Hall. On his way to Madras in October 1915, His Excellency opened the Forest College at Coimbatore and the Podanur-Pollachi Railway line. The next (XI) tour which began on the 29th November 1915 was to the Trichinopoly and Tanjore districts. At Trichinopoly His Excellency received addresses from the Municipal Council, District Board, District Association and the Muhammadans, laid the foundation stone of the Prasanna Venkatesaswami Choultry and presided over the prize distributions at the S.P.G. College and the St. Joseph's College. Srīrangam was also visited from Trichinopoly. At Srīrangam His Excellency received an address from the Municipal Council, visited the Vishnu Temple and the Jambukeswaram Temple. At Trichinopoly as well as

His Excellency the Governor's tours.

at Srīrangam His Excellency inspected several institutions. In the Tanjore district, His Excellency visited Tirukkāttuppalli, Tanjore, Mannārgudi, Negapatam, Nagore, Karaikal, Tranquebar, Māyavaram, Shiyāli and Kumbakōnam. At Tirukkāttuppalli His Excellency opened the new buildings of the High School managed by the Hon'ble Sir P. S. Sivaswami Ayyar, K.C.S.I., C.I.E. While at Tanjore His Excellency received addresses from the Municipal Council, District Board and District Association, and received deputations from the Nīdāmangalam Agricultural Bank, the Muhammadan community and the Mahratta community. Among other institutions His Excellency visited the temple, palace, Raja Mirasidar Hospital and Tanjore Medical School, District Jail and Rao Sahib Abraham Pandither's garden. At Mannārgudi the Municipal Council presented an address to His Excellency, who afterwards visited the Findlay College. The next halt was made at Negapatam where His Excellency was presented with addresses by the local Municipal Council, the Tiruvālūr Municipal Council and the Muhammadans of Negapatam and Nagore. Besides laying the foundation stone of a new building for the Wesleyan High School and opening the new buildings of the National High School, His Excellency received a deputation from the Landing and Shipping Fees Committee and visited the South Indian Railway workshops. His Excellency then proceeded to Tranquebar visiting the Nagore Durga and Karaikal on the way. At Tranquebar His Excellency visited the Old Churches, the Dansborg and the Cemetery. At Māyavaram His Excellency received an address from the Municipal Council and laid the foundation stone of a laboratory attached to the Municipal High School. His Excellency then proceeded to Shiyāli, where he was presented with an address by the Taluk Congress Committee and where he visited the temple and the Hindu High School. The last camp in the Tanjore district was at Kumbakōnam, where His Excellency received addresses from the Municipal Council and the District Association, opened the Brahman ward of the Municipal Hospital and received a deputation from the citizens. His Excellency also visited the Mahamakham tank, the temple, the Government College and some other educational institutions of importance. The next (XII) tour was to the Guntūr and Nellore districts from 14th to 20th December 1915. In the Guntūr district His Excellency received addresses from various local bodies and at Guntūr he laid the foundation stone of the Town Hall and of the new Municipal Hospital, and opened the maternity and surgical block attached to the American Evangelical Lutheran Mission Hospital. His Excellency also visited the American Evangelical Lutheran Mission College and the Salvation Army Prisoners' Home. At Bāpatla His Excellency visited the Salvation Army Criminal Settlement and the Leper Asylum and Yenadi Settlement. At Nellore, besides receiving addresses from local bodies, His Excellency opened the new hostel of the Coles-Ackerman Memorial School and visited various institutions. The next (XIII) tour was to Conjeeveram on the 27th and 28th January 1916 where His Excellency received an address from the Municipal Council, laid the foundation stone of new buildings for the Church of Scotland Mission School and visited the important temples and other institutions. On the 18th March 1916 His Excellency opened the Guntūr-Tenali-Rēpalle Railway

and also attended the Ongole Cattle Show. As in previous years His Excellency, besides according interviews to a number of gentlemen, held informal conferences with the Revenue and Educational officers of each of the districts in which he toured.

Travancore. (M.E. 1090.)*

Part II, paras. 10 to 28.

4. An outstanding event during the year was the visit of Their Excellencies Lord and Lady Pentland to Travancore in October 1914. In April and May 1915 His Highness the Maharaja spent about a month at Coonoor and in July 1915 His Highness received a visit in his State from Their Highnesses the Maharaja Gaekwar and the Maharani of Baroda. The rainfall was heavier than in 1089 but unevenly distributed, and the season was not altogether favourable to agriculture, though there was no appreciable variation in prices or the wages of labour. Travancore was affected by the war, especially in that it checked the trade in coconut products and brought about some scarcity of money and a little difficulty in the collection of revenue. The total revenue fell short by Rs. 26½ lakhs of the expenditure (which included Rs. 13½ lakhs spent on the extension of the railway from Quilon to Trivandrum) and the Darbar balance was reduced from Rs. 76 lakhs to Rs. 49 lakhs ; the large increase on revision of the estimate for this extension and the progressive rise in the expenditure on education emphasized the necessity for retrenchment. The Legislative Council passed nine Regulations, of which the most important dealt with insolvency, succession certificates and the protection of inventions, and provided for the establishment of panchayat courts. There was a slight decrease of crime and of civil litigation, a fall in the birth-rate and a rise in the death-rate.

Cochin. (M.E. 1090.)*

Part II, paras. 29 to 54.

5. The abdication of His Highness Raja Sir Rama Varmah, announced on 8th December 1913, took place on the 7th December 1914 and his successor His Highness Raja Rama Varmah was formally installed by the British Resident on the 21st January 1915. Their Excellencies Lord and Lady Pentland visited the State in October 1914 and Their Highnesses the Maharaja Gaekwar and Maharani of Baroda in July 1915. His Highness the Raja spent about two months of the hot weather in Coonoor. In spite of the depression in the trade in coconut products and some remissions of land revenue, the total receipts were Rs. 46 lakhs and the expenditure Rs. 44½ lakhs and the State surplus was raised from Rs. 12 lakhs to Rs. 13½ lakhs ; this surplus, however, was largely due to the difficulty of obtaining materials for sanitary improvements and consequent short expenditure. The cost of education rose to nearly Rs. 5 lakhs and the total number of pupils under instruction from 63,810 to 67,096. Four regulations were passed into law, of which the most important was one defining the law relating to landlords and tenants and providing for compensation for improvements made by tenants. There was a slight decrease in crime generally, but a marked increase in grave crime ; the percentage of detection and conviction continued high and the percentage of property recovered out of that lost improved from 56·5 to 67·77, a very high figure, compared with that of the Presidency. The birth-rate fell slightly and the death-rate appreciably. The State Railway (worked by the South Indian Railway Company) earned a net profit of 3·84 per cent on the capital.

* 17th August 1914 to 16th August 1915.

Pudukkōttai. (Fasli 1325.)*
Part II, paras. 55 to 65.

6. On 10th August 1915, His Highness the Raja married Miss E. M. Fink, a lady living in Melbourne, Australia. His Highness arrived at Pudukkōttai on 22nd November and returned to Australia in the middle of April 1916. The Legislative Advisory Council met once in the year and passed five regulations. The revenue of the State rose to Rs. 18·7 lakhs and the expenditure fell to Rs. 18·6 lakhs; the State balances were Rs. 28·4 lakhs. The season was fair in the western half of the State only, and the outturn of wet and dry crops was somewhat poorer than usual. Considerable progress was again made in the repair and improvement of the irrigation sources and the extensive road system of the State was maintained in good order. The civil and criminal courts and the police worked efficiently ; there was an increase in civil litigation and a slight decrease in crime but no striking variation from the normal. Four seats in the Municipal Council were thrown open to election instead of two, but the attendance of councillors at meetings was poor. The installation of the Jewell filter was completed, and the town was well supplied with good filtered water; nothing was done in the year for the drainage of the town, although a lakh was sanctioned by the Raja for the purpose. Cholera which broke out in the previous fasli lingered for some time, but disappeared later ; small-pox was prevalent and became a serious epidemic, but the people did not appreciate the necessity of obtaining protection by vaccination : a special grant of Rs. 10,000 was made to improve the sanitation of the villages which were chiefly affected. The town hospital and the several dispensaries did useful work and one veterinary assistant and two agricultural instructors toured in the State. Both under primary and secondary education progress was made, and a special grant of Rs. 5,000 was sanctioned by the Raja for the extension of girls' education.

Banganapalle.
Part II, paras. 66 to 71.

7. His Excellency the Governor of Madras visited Banganapalle on the 26th July 1915 and laid the foundation stone of a new Hospital. The title of Khan Bahadur was conferred on Khaja Akbar Hussain Sahib, Diwan of Banganapalle, during the year. Sahebzada Mir Fazle Ali Khan, heir apparent, was admitted in the Mayo College, Ajmere, in September 1915. The revenue of the State improved owing to the excellence of the harvest. If the extraordinary expenditure of the previous year be excluded, the expenditures of this year and the last year showed no marked variations ; the Nawab continued a monthly donation of Rs. 350 to the Hospital ship. The season was favourable and the price of the staple food grains was stationary ; the indigo industry was revived. Rs. 5,981-6-8 were spent on village works and village sanitation and Rs. 12,814 on education, and 1,248 boys and 235 girls were given free instruction. The Nawab took interest in the details of administration and personally enquired into the grievances of his subjects.

Sandur.
Part II, paras. 72 to 77.

8. The year was a good one for the agriculturists : if anything there was too much rain. Agriculture forms the work of the majority of the labouring classes ; for the manganese mines have not reopened since the war began. In the latter half of the year the export of cumbu to the Bombay Presidency at high prices brought much unexpected profit to many. In spite of the fact that there is much good arable land available

* 1st July 1915 to 30th June 1916.

for cultivation the ryots still confine themselves to the area cultivated by mamul, although of that area nearly one-eighth is annually left waste. Public health was fair ; there were no epidemics and the deaths from small-pox were comparatively few. Education continued on the same lines as usual, and no new schools were opened. Financially the State did not work at a loss but showed a slight surplus. Rs. 46,000 was entered in the budget as the estimated revenue from the mines, but none of this was realized and there is no prospect of realization till the war is over ; thus the State was deprived at a blow of more than one-third of its anticipated income.

Condition of the people. (Fasli 1325.)*

9. The rainfall during both the south-west and the north-east monsoons was above the average in the majority of districts. There was an unusually heavy fall during the north-east monsoon, particularly in October and November throughout the Circars ; this monsoon was, however, much below the average in South Arcot. The season was on the whole favourable except in Chingleput and South Arcot. Prices of food-grains were easier ; in the Northern Circars, in the extreme South and on the West Coast they were somewhat higher ; elsewhere there was a fall except in Madras and its neighbourhood.

Part II, para. 78.

II.—ADMINISTRATION OF THE LAND.

Realization of Land revenue. (Fasli 1324.)†

10. The current demand on account of peshkash decreased owing to the exclusion of Rs. 2,530, being the kattubadi due on some Bissoyi villages in the Parlākimedi estate which was paid direct to Government. The total assessment on ryotwari holdings rose by nearly Rs. 2¾ lakhs, the increase being mainly due to the introduction of the resettlement rates in some of the taluks of Chittoor and North Arcot districts. The improvement in the distribution of rainfall was apparently confined to the centre of the Presidency where there was an increase of Rs. 1·17 lakhs in the revenue derived from water-rate and second crop charge. In other districts season remissions increased by Rs. ·35 lakh. The total demand under land revenue and cesses rose to Rs. 751·79 lakhs, of which 98·7 per cent was collected within the fasli. Of the arrear demand of Rs. 9·53 lakhs, 89 per cent was collected and 1·6 per cent was written off. The proportion of the number of defaulters whose property was actually sold to the total number of pattadars was only 0·5 per thousand. The advances made during the fasli under the two Loans Acts rose by Rs. ·60 lakh. The charges of District Administration excluding the cost of village establishment were 6·8 per cent of the land revenue and cesses realized ; including village service charges the total charges amounted to 13·7 per cent, which was less than the previous year by 4 per cent.

Part II, paras. 80 to 91.

Surveys.

11. Six parties and two Town Survey detachments were at work, two of the six parties being employed almost exclusively on estate surveys. The rest were mainly engaged in revision surveys and resurveys in Government tracts in the districts of Chittoor, South Arcot, Tanjore and Madura, though parts of proprietary estates in Madura and Rāmnād

Part II, paras. 92 to 94.

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* 1st July 1915 to 30th June 1916.

† 1st July 1914 to 30th June 1915.

and the extensions to the Madura municipality were also surveyed. The total cadastral outturn for the year comprised the initial survey of 14·35 square miles and the resurvey and revision survey of 1,352·07 square miles of Government land, the cadastral survey of 717·8 square miles of proprietary estates, the block survey of 171·5 square miles of whole inam villages and the special cadastral survey of ·23 square mile and in addition street surveys in six unions. The Town Survey detachments completed field work under the simplified system in the towns of Chicacole, Vizianagram, Anakapalle, Bodinayakkanur, Tinnevelly and Palamcottah, and in a portion of Tiruvalur, aggregating 24·66 square miles. The Central Office issued prints of village maps for 3,220 square miles, and also various reprints and street maps.

Settlements. *Part II, paras. 95 to 102.*

12. The staff working on settlement consisted of five regular parties and a small staff located in the Nilgiris. In the Ganjām district, the settlement of the Chokkapād khandam and the previously unsettled tracts of the Goomsūr taluk, the revision of quit-rents on village service inams in the proprietary estates in the taluks of Chicacole and Aska, and the classification of the village service inams in the proprietary estates of the Berhampūr taluk were completed. In the Vizagapatam district, an inspection was made of the soils and irrigation sources in the three Government taluks with a view to determine the lines on which their re-settlement should be carried out. In Gōdāvari, a block of 2,630 acres of unassessed lands in the three villages of the Coringa island was classified, and the record of rights for the South Vallūr estate finally published. In the North Arcot district, new rates of assessment were introduced in the remaining villages of the Pōlūr taluk and in all the non-anicut-fed villages of the South Cheyyār and Wandiwash taluks, and re-settlement operations were in progress in the anicut-fed villages of the last two taluks. The introduction of re-settlement rates in the taluks of Chittoor, Chendragiri and Palmanēr in the Chittoor district was complete, as also the revision of quit-rents on village service inams in all the proprietary estates in that district, except the Punganūru zamindari. Diglott registers for 161 villages of the Chittoor district and for four villages of the Anantapur district were prepared. In the Trichinopoly district, the revision of adangals in the Nāmakkal taluk was nearing completion, and the localization of mamul wet areas was finished in twelve villages; diglott registers were submitted for the Pacchaimalai hill villages of the Musiri taluk and four villages in the Karūr taluk. Revision of adangals was complete in 232 villages of the Tindivanam taluk and in the remaining 103 villages of the Villupuram taluk in the South Arcot district; it was commenced in the Gingee taluk and was completed in two villages. The scheme report for the re-settlement of the district was also under preparation. In the Madura district, the special revenue staff completed the revision of adangals in all the villages of the Nilakkōttai and Madura taluks except those included in the Madura municipality. A report on certain preliminary points connected with the re-settlement of the Periyar-affected tracts and a scheme report for the re-settlement of the resumed inam villages in the Rāmnād and Sivaganga zamindaris were submitted to Government. Proposals for the re-settlement of the Nilgiri upper plateau were received.

13. Land Records staffs were employed throughout the year in all the districts of the Presidency. In the taluks of Tenali, Rēpalle and Bāpatla of the Guntūr district the staff was mainly employed in supervising the survey of village-sites. In Trichinopoly, Salem, Madura and South Arcot efforts were concentrated on sub-division work ; in the remaining districts, the staff was employed on regular maintenance work. Two schools for the training of Assistant and Deputy Collectors in Survey and Maintenance were held, as well as schools for the training of revenue subordinates in chain survey in 17 districts, and for the training of karnams in 20 districts.

Land Records. *Part II, paras. 103 to 106.*

14. Owing to the generally favourable character of the season, the area left fallow within patta holdings in fasli 1324 showed a decrease of 3 per cent. Ryotwar holdings increased by 216,000 acres in extent.

Waste lands. (Fasli 1324.)* *Part II, para. 107.*

15. Two estates—Vuyyuru in Kistna and Pārvatīpuram in Vizagapatam—were restored to their proprietors, and one—Madugula in Vizagapatam—came newly under management, making eighteen estates under the Court's superintendence. The Pārvatīpuram estate was handed over in a satisfactory condition, but the Vuyyuru estate was heavily indebted when taken over and large amounts had to be paid to the late zamindar's legatees. It was not therefore possible to effect any substantial administrative reforms in the estate during the period of the Court's management, but the Court spent Rs. ·81 lakh on irrigation works and discharged debts amounting to Rs. 19·28 lakhs, leaving an unliquidated balance of Rs. 4·33 lakhs. The arrear demand of the estates was Rs. 4·89 lakhs and the current demand Rs. 19·55 lakhs, of which Rs. 16·13 lakhs were collected. The receipts and the charges amounted to Rs. 21·51 lakhs and Rs. 14·93 lakhs. The total outlay on public works—irrigation works, buildings, roads and other works—amounted to Rs. 4·05 lakhs, or 26·9 per cent of the ordinary charges. In five estates surplus balances exceeded one lakh of rupees, and were reserved for the purchase of additional landed property, repairs of irrigation works and estate buildings, survey and settlement operations, etc. Of the Rs. 3·47 lakhs due to the estates, Rs. ·73 lakh was collected and Rs. ·14 lakh written off; the outstanding debts were large in Kallikōta-Atagada, South Vallūru, Mīrzāpuram and Kangundi. Exclusive of the two debenture loans amounting to £212,500 on the Kallikōta-Atagada estate, the liabilities of the several estates amounted to Rs. 15·15 lakhs ; of this Rs. 2·25 lakhs were repaid and Rs. ·68 lakh struck off. There were nine wards in residence at Newington during the whole or part of the fasli ; their health, educational and general progress and conduct were on the whole satisfactory. In the first week of January 1915, " Newington Day " was celebrated very successfully and there was a good attendance of old boys. Some of the wards subscribed towards the War Fund from the funds of their estates.

Court of Wards. (Fasli 1324.)* *Part II, paras. 109 to 120.*

16. The principal revenue-paying classes of the Presidency are zamindars, whole inamdars, minor inamdars and ryotwar pattadars. The last class contributes about 78 per cent of the land revenue. There was no appreciable difference in the total number of holdings. Tenants in zamindaris and whole inam villages constitute the rent-paying classes. The relations between landlords and tenants were generally satisfactory.

Revenue and rent-paying classes. (Fasli 1324.)* *Part II paras. 121 to 123.*

* 1st July 1914 to 30th June 1915.

III.—PROTECTION.

Course of Legislation. *Part II, paras. 125 to 127.*

17. Fourteen meetings of the Legislative Council were held during the year and four Acts were passed, viz., the Madras Port Trust (Amendment) Act, 1915, the Madras Outports Landing and Shipping Fees (Amendment) Act, 1915, the Madras Irrigation Cess (Amendment) Act, 1916, and the Madras District Municipalities (Amendment) Act, 1916. Leave was granted to certain Non-Official Additional Members for the introduction of Bills for the amendment of the Madras Medical Registration Act and the Malabar Wills Act and for amending and defining the law applicable to intestate succession among the Mappillas governed by the Marumakkattayam or the Aliyasantana Law of Inheritance. A Bill to amend the Madras Civil Courts Act, 1873, which was introduced at the meeting of the Legislative Council held on the 1st February 1916, was pending before the Council at the close of the year.

Police. (1915. *Part II, paras. 128 to 141.*

18. The sanctioned strength of the police force remained nearly the same as in the previous year, but there was a decrease in the actual strength owing to difficulty in recruitment. Departmental punishments were more numerous but judicial punishments were fewer, and there was again a satisfactory increase in the rewards granted both to members of the police force and to private individuals. The pay of the constabulary in Madras City was raised with effect from 2nd September. The cost of the department rose by about 2 lakhs of rupees, the advance being mainly due to the renting of houses at Government expense for head constables and constables unprovided with Government quarters, additional expenditure on travelling allowances and rewards and the continuance of the additional Deputy Inspector-General throughout the year. The members of the force continued to work for greater co-operation with village officers, and not without success, as evidenced by an increase in the rewards granted to village officers. Notwithstanding a favourable season and a fall in prices of food-grains, there was an increase in the number of true cases of cognizable crime under the Indian Penal Code, grave crimes being more numerous, notably house-breakings and cattle-thefts. An outbreak of Mappilla fanaticism occurred in the Malabar district which the local police were able to suppress promptly and efficiently without the aid of the military. The slight improvement in the percentage of detection noticed in the preceding year was maintained ; though the detective results were still poor, Sub-Inspectors, especially the older and more experienced men, used better methods of dealing with crime, and Superintendents were able to place increased confidence in them. Superior officers took an active interest in the investigation of crime, themselves personally investigating a fair proportion of grave crimes. There was a considerable increase in the value of property lost and the percentage of recovery was higher. The proportion of cases ending in conviction to those decided continued to be good ; the ratio of persons convicted to the number tried improved but was far from satisfactory. There was a further, though slight, decline in the total number of false cases. The number of bad characters at large at the close of the year was slightly in excess of the number at the beginning of it and the percentage of those out of view was again small. The

reclamation of criminal tribes continued to progress, five new tribes being notified under the Criminal Tribes Act. Two more criminal settlements were opened making a total of seven in existence at the end of the year. The number of persons put up under the security sections of the Criminal Procedure Code was somewhat smaller than in the previous year, but the quality of the work showed an improvement. At the end of the year the re-allocation of the limits of police circles was incomplete in two districts only. The public peace was generally well maintained and the force on the whole commanded greater confidence.

Criminal Justice. (1915.) *Part II, paras. 142 to 149.*

Working of the Courts.

19. The year was marked by a general rise of prices and a good deal of trade depression, but in spite of this there was a decline of 6,000 in the number of original cases instituted in the criminal courts during the year. The falling off was noticeable in Trichinopoly, Tinnevelly, Bellary and Vizagapatam, and the increase in North Arcot, Rāmnād and Kistna ; the Presidency town contributed 57,000 cases. The total number of appeals preferred rose to 10,600, an increase of 800 over the preceding year. The cases instituted in the regular Magistrates' Courts fell to 267,000, but rose in the village magistrates' courts to 12,700. The number of cases committed to Sessions Courts in the mufassal was 1,400 ; both in the case of appeals to the Sessions Courts and the Courts of First Class Magistrates there was a noticeable increase over last year. From the reports of the Sessions Judges it appeared that the jury system worked with only moderate success.

State of crime.

20. In cases tried under the Indian Penal Code the percentage of convictions was 42·5 against 39 in the previous year. 13·2 per cent of the cases were rejected under section 203, Criminal Procedure Code, as against 12·6 per cent in the previous year. Considerable attention was again directed to impressing on Subordinate Magistrates the importance of examining complaints at the time of presentation so as to eliminate those that were palpably false before the issue of process. The number of cases reported during the year under the Indian Penal Code was 120,500 ; there was an increase in several districts in cases under criminal intimidation, breach of trust, robbery and dacoity. Cases of cattle-thefts nearly doubled in Chingleput owing, it was said, to the re-opening of the tanneries, but other crimes showed no appreciable increase. In Chittoor better precautions in the Mysore border and the application of the Criminal Tribes Act to three criminal tribes, the Vāyalpād Korachas, the Vanganur Malas and the Jogis, resulted in a marked decrease of cattle, thieving and grave crime. Depression of trade and an increase in the price of food-stuffs were the causes of increased crime in South Arcot, Malabar, Anantapur and Vizagapatam ; in spite of these circumstances the Kallas of Tanjore were more law-abiding than in the previous year. There was an increase in robberies and dacoities in the Mallāpuram division, due mainly to an outbreak of Mappilla lawlessness which was stimulated by rumours about the war, and the disturbed condition of the country necessitated the binding over of a large number of persons. The number of juvenile offenders decreased. 390 persons were released on probation of good conduct under section 562, Criminal Procedure Code, which showed an advance on the figures of last year, but this section should be even more widely used.

Prisons. (1915.) *Part II, paras. 150 to 156.*

21. There was a substantial increase in the prison population during the year. Convicts and civil prisoners were admitted in larger numbers, but the number of under-trial prisoners committed to jails declined. There was a slight fall in the accommodation available in the central and district jails but it was quite sufficient, though there was occasional overcrowding in individual jails, especially among civil prisoners. The number of youthful offenders under the age of fifteen years admitted to jails was small and most of the boys received were removed to the Reformatory School at Chingleput. The Tanjore Jail for adolescents continued to be satisfactorily managed and the work of the staff was efficient. Escapes were rather numerous during the year ; the largest number occurred among the habituals concentrated in the Salem Central Jail where there was also a combination against authority which was put down. Jail discipline was otherwise satisfactory, the number of offences and punishments having fallen considerably ; there were only seven cases of whipping, all awarded to habituals in the Salem Central Jail. Arrangements for imparting elementary education to convicts were extended to all central and district jails during the year and the pay of the teaching staff was improved. The jail schools did, as before, useful work ; religious and moral instruction was imparted in nearly all jails, and lectures were delivered by ladies to female convicts in two jails. The health of the prisoners was satisfactory. The admissions to hospital and the daily average number sick decreased ; there were only 134 deaths, the death-rate declining from 11·83 to 11·00 per mille. The percentage of convicts who lost weight was the lowest on record for fifteen years. Financially, the gross expenditure of the department was less than that of the preceding year, but there was a slight increase in the net cost per head, due to increased dietary and clothing charges. The net cash earnings were larger.

Civil Justice. (1915.) *Part II, paras. 157 to 178.*

22. The year 1914 had established a record in the number of civil suits instituted (489,000). The year 1915 overtopped this by 66,000. The ratio of suits to the population was 1 to 75 in the mufassal and 1 to 25 in the Presidency town. This enormous increase occurred almost entirely in suits for money and movables, and was thus due to causes arising from the war. The war caused depression in some trades and failure in others, and great stringency in the money market ; some people were in real need of money, others were seized with panic and rushed to the Civil Court to recover their outstanding debts. But the tightness of the money market was also said to be the cause of a fall in the number of suits in Chittoor and Rāmnād. The general situation was reflected in the report of the Inspector-General of Prisons who noted a steady increase in the number of civil prisoners. The total value of suits instituted in 1915 in Courts other than Village and Revenue Courts and unpaid tribunals was Rs. 781 lakhs, or Rs. 1 lakh more than in the previous year ; the average value of each suit was Rs. 202 against Rs. 224 in 1914 and Rs. 226 in 1913. Apart from Revenue Courts for which suit values are not reported, 39 per cent of the suits instituted were of the value of Rs. 20 and less, and 56·5 per cent of the suits were between the values of Rs. 20 and Rs. 500. The number of suits above Rs. 500 in value was 22,000, the highest figure on record. The total number of suits instituted in village

courts was 145,600 against 118,700 in 1914, an increase which was most satisfactory. Greater use of these Courts was made in South Arcot, Tanjore and South Canara. The number of suits disposed of by village munsifs sitting alone rose from 107,000 to 121,000 and that by benches rose from 11,000 to 22,000. The number of suits filed in Revenue Courts other than in Agency tracts fell very slightly to 21,700. 106,500 suits were filed in District Munsifs' Courts other than those for the Agency tracts, and there was an increase of 46,000 in the number of small cause suits; this increase was sufficient in itself to occupy the time of a considerable number of Courts. The extraordinary increase in the number of small cause suits filed was partly, and the decrease in original suits was entirely, due to the raising of the small cause powers of all District Munsifs from Rs. 50 to Rs. 100 from the 1st April 1915. Besides the four Revenue officers who exercised the powers of District Munsifs, the number of District Munsifs, permanent and temporary, at the end of the year was 156 against 153 at the end of 1914. The arrears of ordinary suits fell from 54,000 at the end of 1914 to 52,600; but the arrears of small causes increased from 18,500 to 24,000. In the Subordinate Judges' Courts, the District Courts and the High Court disposal of cases increased; in the case of the first two Courts, however, arrears increased to a greater degree. The number of wholly infructuous applications for execution in all Courts continued at an unsatisfactorily high figure; in less than 25 per cent was full or partial satisfaction obtained.

Registration. (1915.) *Part II, paras. 179 to 182.*

23. Financial pressure prevented the opening of new offices and the number of registration offices remained the same (513). The decline in registrations, which set in with the outbreak of the war in August 1914, continued until July 1915. After this there was a perceptible improvement and the remaining months showed a rise; the net result was that registrations declined by only 2·85 per cent. Wills and documents not affecting immovable property increased by 6·4 per cent. Despite the fall in the number of documents the aggregate value rose from Rs. 40·83 crores to Rs. 41·23 crores. The decrease in income was more than balanced by reduced expenditure.

Registered Companies. *Part II para. 183.*

24. The drop in registrations and the gradual disappearance of dubious concerns continued owing to the combined effects of the introduction of the Indian Companies Act, 1913, the depression in trade and the stringency of the money market consequent on the war. The number of working companies again decreased. The year started with 406 working companies and closed with 387. The average paid-up capital of joint stock companies was Rs. 1,71,848, the highest since 1902; only 20 new companies were registered. The number of provident insurance societies fell from 27 to 21 as a result of the healthy operation of the Provident Insurance Societies Act, 1912. The number of life assurance companies remained unchanged.

Notaries Public. *Part II, para. 184.*

25. At 140 stations 178 registering officers performed the duties of a Notary Public at the close of the year. Operations were confined to 18 stations against 21 in 1914–15, the numbers of bills of exchange and promissory notes being 110 and 16, respectively. Expenditure amounted to an eighth of the fees collected.

Co-operative Societies. *
Part II, paras. 185 to 190.

26. One of the most hopeful signs of the prosperous condition of the people generally was that though the war frightened the money-lender, it did not impede the steady growth of co-operative effort which is essentially based on the small savings of the many. A new Central Bank was started under the auspices of the Y.M.C.A. There was an increase in the number of supervising unions and agricultural and non-agricultural societies. Although Rāmnād enjoyed a better season than usual, it was, excepting the Nilgiris, the only district that did not register any new societies. The net profits of the societies received a severe set-back, as it was ruled that overdue interest should not be shown as profit; this accounted for the modest rise in the reserve fund from Rs. 8·06 lakhs to Rs. 8·50 lakhs. The truth is that some societies are very slack in the collection of interest, the agricultural societies being the worst offenders; there was a slight improvement this year, but the collections cannot be called satisfactory so long as the percentage of the amount unpaid out of loans overdue from members is in the neighbourhood of 20. A movement was newly set on foot to form a Provincial Co-operative Bank on the lines recommended by the Imperial Committee on Co-operation. It was also proposed to start societies for the benefit of Panchamas if possible, but the difficulties of finding suitable managers and capital and sufficiently educated Panchamas were great.

Local Board Administration.
Part II, paras. 191 to 201.

27. The number and maximum strength of the district boards underwent no change and the proportion of the elected members to the total strength was practically the same as in the previous year. No new taluk boards were created, but the maximum strength of these boards was raised from 1,702 to 1,749. Ten new union panchayats were constituted. Three taluk boards enjoyed the privilege of electing their own presidents and in the case of nineteen others non-officials were appointed as presidents ; the percentage of official to non-official members on the boards made a further decline. The total income of the local boards, excluding the transactions under debt heads, declined by over seventeen lakhs owing to a reduction in the grants from Government ; the expenditure exceeded the receipts by seventeen lakhs. Of this expenditure, 48·8 per cent was spent upon public works, repairs to communications accounting for more than half of that allotment, and 14·7 was spent on education. Five new medical institutions were opened and the number of patients treated also advanced ; the outlay on these institutions was nearly 6·0 per cent of the total expenditure. The profits derived by the Kistna and Tanjore District Boards from their railways that were open for traffic amounted to 8·1 and 10·4 per cent, respectively. Two new railway lines, one from Podanūr to Pollachi in the Coimbatore district and the other from Tenali to Rēpalle in the Guntūr district, were opened for traffic under the ownership of the Coimbatore and Guntūr District Boards.

Municipal Administration—Mufassal.
Part II, paras. 202 to 209.

28. An important feature of the year was the visit of the town-planning adviser, Mr. H. V. Lanchester, one of the Vice-Presidents of the Royal Institute of British Architects. He delivered a course of lectures on town-planning and examined and advised local bodies and the Government upon important schemes for the relief of congestion and the formation and extension of suburbs. The two new municipalities of Peddāpuram and Narasaraopet began work on 1st April 1915, and the

* 1st July 1915 to 30th June 1916.

unions of Virudupatti, Proddattur and Dhārāpuram were constituted municipalities in the year. There were in all 67 municipalities with 1,019 members on the councils, comprising 86 ex-officio, 431 nominated and 502 elected councillors ; the proportion of Indian to European and Eurasian members increased slightly. Though the current receipts of the municipalities declined by about one lakh, the income from taxation rose by Rs. 2·69 lakhs and the average incidence of taxation per head rose from Rs. 1-9-8 to Rs. 1-10-11. The aggregate expenditure exceeded the receipts by Rs. 5·63 lakhs and the closing balance was Rs. 39·40 lakhs. Over one-third of the expenditure was devoted to public works, of which Rs. 6·44 lakhs were spent on communications ; the educational charges amounted to 10 per cent of the income from general taxation. Excluding amounts covered by the sinking fund, the public debt outstanding against municipalities was over one-third of the annual revenues, and about 4·7 per cent was covered by sinking funds.

Municipal Administration—City of Madras. *Part II, paras. 210 to 220.*

29. The revenues of the Corporation of Madras showed an increase of Rs. 44,000 over those of the previous year. Grants were received from Government for improvement of water-supply and drainage, acquisition of land for a washermen's settlement and improvements to Kelly's drain. The incidence of taxation was the same as that of 1914–15, viz., Rs. 3–14–5. The expenditure rose by Rs. 2·09 lakhs, the increase occurring under works executed from capital account. The number of miles of road re-formed rose from 31·23 to 59·30, the increase being due to the timely supply of road metal. Lands and buildings were acquired for widening roads and rounding off dangerous corners. Seven new model schools were constructed and three more were in course of construction. Model cow-houses were being built. Gravitation mains for the Napier Park and Purasawalkum areas and a storm water drainage in North Triplicane were in course of construction. Preventive measures were taken to control the waste of water. Deaths from malaria were considerably reduced owing to the anti-malarial operations. The birth-rate rose slightly and the death-rate fell from 46·6 to 36·0 per mille ; the city continued to enjoy immunity from plague. Additional electric lights were installed and two more motor fire-engines were purchased.

Military (Volunteering). *Part II, para. 221.*

30. There were fewer volunteers attached to the 9th Secunderabad division, which was due to the fact that from each corps men had gone to the front to serve in the regular forces as gunners, motor cyclists, despatch riders, hospital orderlies, motor boat drivers or in other capacities ; a detachment of the Madras Artillery Volunteers also went on service with the Volunteer Artillery Battery of the Indian Expeditionary Force. Five corps were mobilized during the year, four being for garrison duty at Fort St. George, St. Thomas' Mount and Bangalore ; 200 men of the Malabar Volunteer Rifles were called out for actual military service as armoury guards in the West Coast towns.

Marine. *Part II, paras. 222 to 226.*

31. The Port Trust revenues naturally suffered very heavily from the war. Owing to the reservation by Government of much shipping on account of the war, the tonnage available for ordinary trade was greatly reduced, and this resulted in a corresponding decrease in the receipts from harbour dues. In the case of coal previously brought in large quantities by sea to Madras from Calcutta, it was found both cheaper and

more certain to use the railways ; only a small amount of the coal could be brought by sea. Thus as a result of the war both directly as affecting the markets for commodities and indirectly as causing a scarcity of mercantile tonnage, the year under review saw very marked changes in the quantities of the various kinds of merchandise passing through the port ; but in spite of this the net result was that the value of the sea-borne trade increased by 6 per cent over that of the previous year, in which there were eight months of war conditions, and has only twice been exceeded, viz., in 1912–13 and 1913–14. The chief falling off as compared with previous years was in the imports of coal, railway material, mineral oil and piece-goods, and in the exports of cotton and bone meal ; the only considerable increase amongst imports was in building materials, chiefly cement. The year was a record year for the export of groundnut, 97,200 tons being exported. Hides, skins, tea and ores, chiefly magnesite, were sent abroad in greatly increased quantities. But though the volume of tonnage passing through the Port declined, excellent progress was made in the development of the harbour for which a Government loan was sanctioned two years ago. Over 1,000 feet of the north end of the west quay and 251 feet of the south end were completed, and owing to the deepening of the water two vessels can now lie at the north end of the quay. The railway lines were remodelled to suit the new buildings, so that trucks of both gauges can load at the new warehouses. The south wing of the new harbour office, the new signal room, part of one of the new merchants' warehouses and four new platforms serving the four transit sheds were completed. The new hydraulic power-house only lacked a water tower. The receipts of the Port showed a decrease of 7·2 per cent. The gross expenditure was 89·92 of the gross receipts and the actual working expenses were just half the actual harbour receipts. It was satisfactory to note a decrease of one lakh in receipts from transit dues, due to the rapidity with which the imports were cleared on arrival. Trade also decreased at the minor ports and there was a great dearth of coasting vessels. Several schemes designed to improve landing and shipping facilities at Tuticorin, Tellicherry and Mangalore were subsidised by loans from the Minor Ports Fund. Two accidents occurred in the port at Vizagapatam, and in one 27 lives were lost. The Madras Outports Landing and Shipping Fees Act, 1885, was introduced into the port of Tellicherry.

Mortality caused by wild animals and snakes. (1915.)
Part II, paras. 227 to 229.

32. 551 persons were killed by wild animals against 306 in the previous year and 1,519 persons met their death by snakebite. Fewer cattle were killed by wild animals, but there was a slight increase in the number of deaths from snakebite. Rs. 43,266 were spent on the destruction of wild animals and snakes and the removal of rank undergrowth.

Arms, explosives, sulphur and poisons. (1915.)
Part II, paras. 230 and 231.

33. The steady decrease in the number of licences issued continued ; this is without doubt due to the fact that as the police force becomes more efficient, the need for private persons to possess arms for self-defence decreases and District officers are able to scrutinize more carefully the re-issue of old licences. The bulk of the reduction of licences was under Form XVI. Prosecutions under the Arms Act were also steadily reduced, and the increased percentage of convictions showed that the Act was working well. There were fewer licences issued under the Explosives Act,

perhaps because the favourable season and the scarcity of money militated against the digging of new wells. The rise in the price of sulphur and the closing down of mica mines resulted in a decreased sale of sulphur. The working of the Poisons Act called for no remarks ; in the few cases of poisoning that came up for investigation, it was not possible to trace the poison used to any licensed shop.

IV.—PRODUCTION AND DISTRIBUTION.

Agriculture. *Part II, paras. 232 to 242.*

34. The notable events of the year were the very prominent part which the Department of Agriculture took in the Madras Park Fair Exhibition held in December 1915 and January 1916, and the dissolution of the Central Agricultural Committee, which could no longer cope with the multifarious objects for which it was started. Ten agricultural stations were at work and the activities of the department in the districts were directed on the usual lines. Better varieties of sugarcane were being more extensively planted and there was an increased demand for iron mills for crushing. Throughout the central and southern districts, there was a general diminution in the rate of seed used for paddy cultivation and in the south the sowing of better strains of cotton progressed ; here too strenuous efforts were made both by the department and by those interested in maintaining the superiority of Tinnevelly cotton to prevent the admixture of Tinnevellies with the inferior pulicchai variety. The scientific sections continued to do useful work ; the soil survey of the deltaic portions of the Guntur district was completed and a similar survey was commenced in the Kistna delta. Interesting results were obtained from investigations on the effect of green manures on paddy soil conditions and important investigations into the inheritance of character in paddy were in progress. At the sugarcane breeding station many North Indian canes were crossed with tropical canes, and investigations were also made to discover correlations between the various visible botanical characters of the canes and the richness of their juices. A new Agricultural Co-operative Society was formed for the co-operative purchase of seeds, manure and implements.

Civil Veterinary Department. *Part II, paras. 243 to 248.*

35. Three Veterinary Inspectors and nine assistants were added to the staff which consisted of ten inspectors and 91 assistants. In order to meet the growing demand for veterinary officers, the number of annual admissions to the college was temporarily raised from 30 to 40. New hospitals were opened at Erode, Amalapuram, Nellore, Hindupur and Salem, a dispensary at Nandyal and minor dispensaries at Negapatam and Bhadrachalam. There was a slight decrease in the number of inoculations performed against rinderpest and in the cases treated by the touring Veterinary Inspectors and assistants ; more castrations were performed than in the previous year. The mortality among cattle was reduced, though the number of deaths from rinderpest was still high.

Weather and Crops. (Fasli 1325.)* *Part II, paras. 250 and 251.*

36. The rainfall during the south-west monsoon was above the average in all the districts except the Vizagapatam Agency, Kurnool and South Canara, and proved favourable to agricultural operations except in

* 1st July 1915 to 30th June 1916.

Chingleput and South Arcot. During the north-east monsoon also, the rainfall was above the average in the majority of districts. The area under cultivation exceeded the normal extent by 2·04 per cent. The areas under paddy, cholam, cumbu, ragi, castors, indigo and tobacco showed an increase ; those under gingelly, ground-nut, sugarcane and cotton decreased. The outturn of crops as reported was below the normal except in the case of indigo in Coimbatore, but these reports are unreliable and generally underestimate the harvest.

Horticulture. *Part II, para. 252.* Government Botanical Gardens and Parks, the Nilgiris.

37. Frost was unusually severe at Ootacamund and many trees and shrubs were cut down to the ground. Rainfall was not well distributed, there being practically no rain in the last four months of the year. Some of the ponds in the garden were cleaned with a view to preventing the breeding of *Anopheles* mosquitoes in the vicinity of the Botanic Gardens. A quantity of fruit trees were imported from Australia and they were planted in the Botanic Gardens and in Sim's Park. The potatoes planted in April failed, but the crop planted in August was satisfactory. The demand for good seed potatoes continued. An increasing number of annuals were grown in the Gardens and several new species flowered. The imported peach and apple trees have borne good fruit but the plums, though they flowered well, did not set much fruit. At Benhope it was decided to cut down the forest trees which seemed to be retarding the growth of the coffee.

The Agri-Horticultural Society, Madras. (1915.)

38. The income of the society fell off very much owing to the expiry of the contract for keeping up the gardens at the High Court, Marina and Chepauk Park. Various improvements were effected in the irrigation of the society's gardens.

Government Cinchona Plantations. *Part II, paras. 254 and 255.*

39. Under cinchona there was a small extension of 125·96 acres, comprising 42·46 acres at Dodabetta, 28 acres at Neduvattam, and 55·50 acres at Hooker ; there were no extensions under fuel. The area under cultivation at the close of the year was 1,679·99 acres, composed of 1,002·44 acres under cinchona and 677·55 acres under fuel. The bark used in the factory consisted of Java-grown *ledgeriana*, locally purchased and plantation-grown *officinalis* bark. Though the percentage of quinine extraction was lower than in the previous year, the output of quinine was larger. The cost of manufacture increased with a rise in the price of bark. Owing to the orders from the Medical Stores the issues of quinine in bulk were larger than in the previous year and there was also an increase in the sale of cinchona febrifuge and of pice packets. The sale of quinine packets was extended to the elementary schoolmasters and vaccinators under District Boards and Municipalities.

Fisheries. *Part II, paras. 256 to 260.*

40. Following a bad year in 1914-15 this year was almost disastrous for fishing, as a fish famine occurred along the whole coast. Sardines were only obtained a few times in eight months and mackerel hardly more often. Only prawns were obtained in any numbers and these obtained a ready market both fresh and tinned. Various new methods of pickling and tinning fish were tried ; owing to the dearness of European vinegar and the weak strength of the local vinegar, manufacture was begun by the department, and excellent vinegar was made below the price of the local commodity. Piscicultural work was confined to the fresh waters of

the Presidency. The work of the Sunkesula fish farm continued to progress and many tanks were stocked ; a new farm was under construction in Nellore and fish were successfully introduced from Java and Mauritius. All the important waters of the Presidency are being gradually taken over and stocked with good fish. The Marine Fish Farm at Tuticorin worked well, supplying fish bait and excellent prawns. The demand for oysters was increasing, and the production of the chank fisheries doubled, bringing in large profits to the department. The department also assisted a number of divers of Tuticorin and Rāmnād to obtain boats of their own ; under the old system the divers received advances and became the debt-bound slaves of the boat owners, who exploited them shamelessly. Excellent fish-oil soaps with insecticidal qualities were manufactured ; a large grant was also given to develop the soap industry and a toilet soap plant was laid down. Thus if the department continues with its present success there is every reason to expect that it may soon be self-supporting.

Forests. (Fasli 1325.)*

Part II, paras. 261 to 277.

Administration.

41. The area of reserved forest decreased by 26 square miles owing to the disafforestation of areas which were abandoned in pursuance of the policy of giving up small scattered forests. An important change in the administration was that the District Forest Officer was declared to be the head of the Forest Department in his own district, and the Conservator was made responsible for and given control over all professional, departmental and financial matters in his circle, and invested with independent authority regarding the appointment, transfer and punishment of subordinate forest officials. An additional forest charge was created in South Canara and the division of North Arcot into three forest charges and the constitution of three forest divisions in Cuddapah were sanctioned. The classification of the forests in accordance with the orders of Government passed on the reports of the Forest Committee was completed in all districts except a portion of Kurnool and South Arcot. The officer deputed to accelerate the introduction of forest panchayats continued his work and the panchayats that were constituted worked well on the whole. There were this year 147 panchayats managing nearly 210 square miles of reserved and unreserved land ; last year there were only 76 panchayats, managing about 56 square miles. In the Nellore district the Kancha system of leasing out the grazing in the forests made good progress and a special Deputy Collector was appointed for six months to encourage the movement. By the withdrawal of forest subordinates, friction was reduced and forest offences declined ; there was also an increase of revenue. The Forest Village Scheme was also started in order to associate the people more closely with the working of the Forest Department. By this, where forests have been created out of unreserves, the ryots of the adjoining villages are recognized as having a claim to preferential treatment as regards grazing and other privileges in "open" portions of the reserves ; they in their turn will be expected to take an active part in protecting the forest from fire and other damage. The important work of making special working plans for forests was continued and working plans were prepared for 441 square miles ; these included plans for the fuel areas of the Madura district and the Hosur sandalwood

Working plans.

* 1st July 1915 to 30th June 1916.

areas ; in the case of the latter it was also found that the wood available had been much underestimated and a large increase of revenue might be expected. In the Northern Circle an interim working plan was made out for the forests of Goomsur and Pondakhol and in the Western Circle the final working plan for the Nilambur Teak Plantations was under preparation. Nearly 6,000 square miles of forest were still without working plans, and in addition many of the existing working plans were found to require revision. Owing to the war, expenditure was generally curtailed, and in especial the expenditure on communications and buildings; the most important work carried out was the alignment of 14 miles of the Alangayam-Komattiyur road in the South Vellore division. An estimate for Rs. 1·11 lakhs was prepared for its construction and the work was in progress ; estimates were also prepared for the new Mount Stuart Ghat road. The tramway in the Tekkadi leased forest was extended and in Nellore the laying of tram lines for fuel transport was carried out as usual ; at Sriharikota 1,518 tons were transported, an increase of 909 tons over the figures of last year.

Communications and Buildings.

Protection of forests.

42. There was a slight increase in forest crime ; offences were most numerous in Guntūr and Nellore, and the Southern Circle, in which most of the reserved forests were small, scattered and contiguous to villages and cultivation. The introduction of the Forest Village Scheme for the more valuable forests, and the creation of village panchayats to manage the minor forests, in which grazing is the chief consideration, should give the villagers an interest in the protection of the forests, and effect a diminution in forest crime. More than half the total number of cases were as usual compounded and of the cases disposed of by Magistrates, 7,474 ended in conviction, and 587 in acquittal. Owing to the prolonged hot weather and failure of the early rains the danger from fire was greater than usual ; special protection was attempted over 6,763 square miles, but the percentage of failure rose from 6·60 to 17 per cent. In many cases fires were attributed to deliberate incendiarism; thus in Kurnool the Chenchus set fire to the forests near Nagalati and Pecheruvu in revenge for their having been stopped from collecting fees from pilgrims to Sriselam. In Gōdāvari Lower, however, the services of hillmen were used with the satisfactory result that the area protected was 97 per cent. The cost per square mile of forest successfully protected was reduced from Rs. 23-9-8 to Rs. 20-12-7. The number of cattle impounded decreased substantially.

Protection against fire.

Sylviculture and exploitation.

43. Expenditure on artificial reproduction was greatly reduced, as it had been decided that the attempt to restock denuded areas where the soil was hard and unfertile was not justified by the results obtained. Only Rs. 18,973 were spent, of which Rs. 15,540 were devoted to teak plantations in West Kurnool, where the principal object was to provide work to keep the idle hands of the Chenchus out of mischief.

Finance.

44. The gross revenue amounted to Rs. 39·38 lakhs, a decrease of Rs. ·79 lakh compared with the figures of last year, the receipts of which were swollen by the sale of casuarina plantations, carried out in accordance with the new policy of leaving fuel plantations to private enterprise wherever possible. The net income increased from Rs. 10·81 lakhs to Rs. 13·31 lakhs, and the surplus was distributed over all the circles, being partly due to the postponement of all avoidable expenditure.

45. The war was again responsible for a decrease in the output of the mines, many manganese and mica mines being closed down. In Vizagapatam the manganese mines at Kodur and Garbham have been closed since the outbreak of the war, and other mines were temporarily closed during 1915. There was however an increased output of gold in Anantapur and magnesite in Salem. No diamonds were extracted during the year. The condition of the employees was generally good, but there were six fatal accidents, all in Anantapur.

Mines (1915.) *Part II, paras. 278 and 279.*

46. There were 417 factories in the Presidency falling within the scope of the Factories Act ; the most important were the cotton spinning and weaving mills and the jute mills. The chief industries carried on in the concerns which were not classed as factories were, apart from agricultural operations, rope-making, ginning, pressing and weaving cotton, and rice-hulling ; no other industry gave employment to a daily average of more than one thousand hands. The development of manufactures was impeded seriously by the difficulty experienced in obtaining machines, pipes and other imported articles. The leather industry revived after its set-back in the previous year ; but the price of leather fluctuated as the over-seas demand was not sufficient. Experiments were continued by the Department of Industries in the making of glass, pencils and paper ; the manufacture of glass was hindered by the lack of a suitable furnace ; for making pencils difficulties in the matter of suitable graphite and wood were not entirely overcome, and the machinery at the paper mill that was taken over was found to require considerable repairs and renewals. The dyeing expert devoted himself to the investigation of indigenous dye-stuffs to ascertain if these could be made to replace the synthetic dyes, but the results were not encouraging ; materials were found to be scarce and costly and the results gave neither the bright shades nor the ranges of colours obtained hitherto from synthetic dyes. The working of the Factories Act continued smoothly ; sanitation was improved in many factories, though at times in face of considerable difficulties created by the operatives. Most factories allowed intervals of rest after every six hours' work, or arranged their labour in shifts. Rules were enforced to safeguard women and children from excessive hours of work.

Manufactures. *Part II, paras. 280 to 282.*

47. The total value of the Sea-borne trade of the Presidency was nearly Rs. 4,887 lakhs, showing an increase of Rs. 19 lakhs, or 0·39 per cent, as compared with that of the preceding year. The depressing effect of the war upon foreign trade continued during the year, but in spite of the shortage of tonnage, the high rates of freight and the closure of many of the ordinary trade channels as a result of the special restrictions which considerations of military and public interest have imposed, the total value of the trade was greater than that of the previous twelve months. Trade with the enemy countries and with Belgium completely stopped and that with most neutral countries in Europe also greatly diminished ; but some compensation was obtained in the shape of larger exports to the United Kingdom. Imports so far showed but little recovery from the sudden drop which occurred at the outbreak of hostilities, but exports revived to some extent owing to the larger demand for indigo and leather. The net result was that foreign trade improved by Rs. 148·97 lakhs, or by 4 per cent, but coasting trade declined by Rs. 154·58 lakhs, or by 12 per

Sea-borne trade. *Part II, paras. 283 to 303.*

Imports.

cent. Under foreign trade imports declined by Rs. 115·10 lakhs, or by 9 per cent, and exports improved by Rs. 264·07 lakhs, or by 12 per cent. The chief port registered a total trade of Rs. 2,092·23 lakhs against Rs. 1,962·81 lakhs in the preceding year, an increase of Rs. 129·42 lakhs, or 7 per cent, representing 42 per cent of the aggregate trade of the Presidency as compared with 40 per cent in 1914–15. The total trade of the outports amounted to Rs. 2,794·67 lakhs compared with Rs. 2,904·99 lakhs in the previous year. To this total the ports of Tuticorin, Cochin, Dhanushkodi, Calicut, Cocanada, Mangalore, Negapatam and Cuddalore each contributed more than Rs. 100 lakhs. The trade of all these ports, with the exception of Dhanushkodi and Negapatam, decreased, particularly in the case of Cochin, Cocanada and Tellicherry, where trade fell by 19, 17 and 31 per cent, respectively. The trade of Dhanushkodi improved by 225 per cent and that of Negapatam by 17 per cent. Foreign imports decreased by about Rs. 100 lakhs, or by 8 per cent, as there were smaller receipts of cotton manufactures, railway materials, kerosine oil, machinery and millwork and metals, partly counterbalanced by larger supplies of cotton twist and yarn, gold and silver thread and cement. The total value of imports of cotton goods, representing 31 per cent of the total foreign imports, declined by 14 per cent. The decrease under railway materials was the result of smaller receipts of rails, chairs and iron and wooden sleepers. There was a fall of 26 per cent in the value of the imports of kerosine oil—ascribed to the requisition of several tank steamers by the Government. There was a further decline under dyes and glassware owing to cessation of imports from enemy countries. Consequently the price of the former rose abnormally while the shortage in the case of the latter was partly met by large supplies from Japan and the United Kingdom. Imports of cotton twist and yarn improved by 30 per cent ; for the import of large quantities of coloured yarns was encouraged by the great local scarcity of dyeing substances. Exports of country produce improved by Rs. 290·64 lakhs, or by 14 per cent, and those of foreign merchandise by Rs. 6·44 lakhs, or by 43 per cent. The increase in the former case was due to larger shipments of grain and pulse, indigo, leather, cotton manufactures, tea, rubber, oil-cakes, cotton twist and yarn, and raw hides and skins. This was partly counterbalanced by smaller exports of raw cotton and seeds. Owing to the larger demand from Ceylon for rice, the value of the grain and pulse exported rose by 41 per cent. The war created a great demand again for natural indigo to replace the shortages of coal-tar dyes. The area under indigo cultivation was more than double that sown in 1914–15 and the yield showed an increase of 82 per cent. Exports of tanned hides improved by 31 per cent and those of tanned skins by 14 per cent. Exports of cotton piece-goods rose by 44 per cent and those of cotton twist and yarn by 56 per cent in value ; the increase in the latter case was attributed to the resumption of ordinary shipments to Shanghai which had ceased during the first four months of the war, and also to the comparatively low freight rates. The large crops of tea and rubber gave rise to increased shipments. Exports of seeds, including copra, fell by 13 per cent in value ; this decline was partly due to the fall in prices of some of the seeds, such as ground-nuts, and to smaller shipments of copra.

Exports.

48. The trade with the United Kingdom represented 47·33 per cent of the total trade as compared with 46·76 per cent in the previous year and showed an increase of Rs. 113·14 lakhs or 7 per cent. The trade with British Empire, representing 75 per cent of the aggregate, improved by 12 per cent. The trade with the continent of Europe showed a decline of Rs. 239·03 lakhs, or 35 per cent. Japan and China mainly contributed to the increase of Rs. 21·86 lakhs, or 11 per cent, in the trade with Asiatic ports. The trade with Africa improved by Rs. 7·39 lakhs, or more than 200 per cent, owing to larger exports of indigo to Egypt, and that with America, which was practically confined to the United States, improved by Rs. 105·9 lakhs, or by 91 per cent. Trade according to countries.

49. The total value of coasting trade declined by Rs. 154·58 lakhs, or by 12 per cent. There was a decrease of Rs. 90 lakhs, or 12 per cent, under imports, and Rs. 64·64 lakhs, or 12 per cent, under exports. Imports of private merchandise declined by Rs. 89 lakhs, or 12 per cent, owing to smaller arrivals of grain and pulse, and exports by Rs. 63·75 lakhs, or 11 per cent, in consequence of smaller shipments of ground-nuts and coconut oil. Coasting Trade.

50. The total number of vessels engaged in the foreign trade which entered and cleared was 3,880 with an aggregate tonnage of 2,626,735, compared with 3,628 of 2,970,198 tons in 1914–15. The number of vessels (excluding native craft) under British colours which entered and cleared was 2,773 with an aggregate tonnage of 2,315,119 against 2,631 of 2,516,273 tons in the previous year. The number of vessels under foreign colours was 87 with a tonnage of 247,636 against 138 of 406,369 tons in the previous year. The vessels engaged in coasting trade declined from 27,670 to 25,413 and their tonnage from 9,990,745 to 7,086,420. Shipping.

51. The services of 14 more officers of the department were placed at the disposal of the Army Department, in addition to those who joined Military duty last year. Some redistribution of territorial charges was effected, since the Tank Restoration Scheme Division, First Circle, was abolished on account of the reduction of the grants. The estimated total cost of major works under execution increased, but the expenditure on works in progress during 1915–16 was less than in 1914–15. Owing to the general curtailing of expenditure there was a decrease in the outturn of work at all the three workshops. The Public Works Workshops, Madras, undertook part of the processes of manufacturing high explosive shells for the Munitions Department. The value of stores obtained for the Public Works Stores, Madras, was greater than that of the previous years, mainly owing to the receipt of stores worth Rs. 1·27 lakhs from the Shell and Gun Factory, Cossipore, towards the manufacture of high explosive shells. **Public Works—General.** *Part II, paras. 304 to 307.*

52. The Guntūr-Tenali-Repalli Railway measuring 36·95 miles and the Podanur-Pollachi Railway measuring 25·04 miles were newly opened for traffic. The construction of the Tirutturaippundi-Vedaranniyam and Quilon-Trivandrum Railways, 61·03 miles in length, continued, and that of the Tinnevelly-Tiruchendur and the Suramangalam-Salem Railways, 42·04 miles in length, was begun ; in consequence of the abnormal conditions brought about by the war the construction of many other lines had to be deferred. The offer of Messrs. Binny & Co. to construct the Dindigul- **Railways.** *Part II, paras. 308 to 311.*

Palghat Railway was accepted by the Railway Board and the Madura and Coimbatore District Boards resolved to take shares in that branch line company; the Bombay Company also applied for a concession to build the Rāmnād-Virudupatti-Tenkasi Railway and their application was under the consideration of the Government. There were two collisions resulting in some damage to rolling-stock and a slight injury to a few passengers. Owing to a heavy storm an inspection carriage collided with a goods train near Guntakal, and on the Parvatipur branch of the Bengal-Nagpur Railway floods washed away a bridge and a mixed train was derailed; considerable damage was done but there was no loss of life. The views of the District Boards and the Railway Companies in regard to the model agreement for working District Board Railways having been received, the views of this Government thereon were submitted for the consideration of the Railway Board. The Tanjore and Kistna District Board Railways worked at a net profit of 8·16 and 10·40 per cent respectively.

Tramways. *Part II, para. 312.*

53. There was only one Electric Tramway—that in the Presidency town—and it conveyed nineteen million passengers over its lines. The earnings and net profit of the Company were not reported.

Canals. *Part II, paras. 313 and 314.*

54. The ton mileage and the value of goods carried on canals increased, but the number of passengers fell considerably; in the previous year's comparison the value of goods had increased and the number of passengers fallen.

Irrigation. *Part II, paras. 315 to 329.*

55. The outlay incurred on irrigation works was Rs. 7·13 lakhs less than in the previous year, but the area irrigated under all classes of irrigation works increased by about 200,000 acres with a consequent increase in revenue of Rs. 11·68 lakhs. The expenditure on class I—Major Protective works—Capital Account—was incurred mainly on the Mopad Project in the Nellore district and the Bhavanasi Project in the Guntūr district. The Rushikulya system was the only system in operation at present under this head and it worked at a loss of Rs. 42,357 for the year. The expenditure on Major Productive works—Capital Account—was incurred chiefly on the Gōdāvari and the Kistna Delta systems, the Kurnool-Cuddapah canal, the Toludur Project and the Cauvery Delta system. The area charged as irrigated under this class of works was about three and a half million acres and the revenue gave a return of 6·65 per cent on the capital outlay, or 10·14 per cent if the Kurnool-Cuddapah canal, which failed to prove productive, be excluded. The area irrigated under "Minor works for which Capital and Revenue accounts are kept" was 363,000 acres and the net revenue derived therefrom gave a return of 2·50 per cent on the capital outlay. Under the Tank Restoration Scheme the average area of cultivation under the works that are to be investigated is about 2·25 millions of acres; up to the end of the year works supplying 51·78 per cent of the area had been investigated and the year's expenditure was Rs. 5·09 lakhs. The plans and estimates for the Kistna Reservoir Project were still under revision.

Major Protective works.

Major Productive works.

Minor works.

Investigation of projects.

V.—REVENUE AND FINANCE.

General Revenue and Expenditure. *Part II, paras. 330 to 332.*

56. The gross revenue of the Presidency, both Imperial and Provincial, rose from Rs. 1,871 lakhs in 1914–15 to Rs. 1,952¾ lakhs, but the gross expenditure charged to Revenue fell from Rs. 920½ lakhs to Rs. 870¾ lakhs. The surplus of the year amounted to Rs. 1,082 lakhs and exceeded that of the previous year by Rs. 131½ lakhs, owing to an increase in the net State Railway earnings (Rs. 65¼ lakhs) and the Land Revenue realizations (Rs. 20½ lakhs) and a curtailment of expenditure (Rs. 49½ lakhs), chiefly in the subsidies paid to local bodies.

Imperial Revenues. *Part II, paras. 333 to 346.*

57. The receipts from Land Revenue amounted to Rs. 698 lakhs and exceeded the previous year's revenue by Rs. 20½ lakhs ; this was due to introduction of resettlement rates in some taluks, the more favourable character of the season and a revival of trade conditions. Canal revenue contributed Rs. 2·35 lakhs against Rs. 2·22 lakhs in 1914–15. The Customs revenue amounted to Rs. 79½ lakhs, being Rs. 8¾ lakhs less than that of the previous year, owing to smaller exports of petroleum, cotton goods, silver bullion, metals, spirits and liquors ; this was partly counterbalanced by larger imports of manufactured articles and articles of food and drink, larger exports of rice and the new duty on tea. The Salt revenue fell to Rs. 115¾ lakhs ; the decline of Rs. 1¼ lakhs was chiefly under duty on Government and Excise salt, due to smaller realizations on account of cash and credit sales. The charges were Rs. 15¾ lakhs against Rs. 14¼ lakhs in the previous year, the increase being chiefly under purchase of salt (manufacturer's share) due to larger outturn in the Government factories ; the quantity of salt manufactured was 94 lakhs of maunds against an average annual outturn of 109½ lakhs. The total issues for home and inland consumption amounted to 113½ lakhs of maunds against 123¼ lakhs of maunds in the previous year. The revival of trade and the growth of monetary transactions brought the Stamp revenue up from Rs. 139 lakhs to Rs. 151 lakhs ; charges decreased by Rs. ·20 lakh, and amounted to Rs. 4·13 lakhs. The cost price of opium sold in the Excise Department was Rs. 4 lakhs and the realizations of opium revenue by the Excise Department rose from Rs. 20¼ lakhs to Rs. 21 lakhs. Excise revenue generally, however, fell to Rs. 330 lakhs from Rs. 346 lakhs, since the adverse effect of the war was even more serious in 1915–16 than in 1914–15 and was felt under nearly all items of Excise. The charges amounted to Rs. 18½ lakhs. Income-tax receipts increased by half a lakh and totalled Rs. 40¾ lakhs. Imperial revenues from other sources amounted to Rs. 388 lakhs and exceeded the revenue of 1914–15 by Rs. 65 lakhs ; this was mainly contributed by State Railway receipts. The expenditure under other Imperial heads also advanced by Rs. 3½ lakhs and amounted to Rs. 71¼ lakhs, since there were increases under a number of heads, notably Subsidized Companies and Civil Works in charge of Public Works Officers, counterbalanced by a decrease under Irrigation, Major Works, Working Expenses. The capital outlay on State Railways and Irrigation Works not charged to

Land* Revenue. Canals. Customs. Salt. Stamps.* Opium. Excise.* Income-tax.* Other Imperial revenue and expenditure.

* The receipts from LAND REVENUE and the receipts and charges under STAMPS, EXCISE (including the realizations of opium revenue by the Excise Department) and INCOME-TAX are shared equally between Imperial and Provincial. But the comparison made here is in respect of the total figures (both Imperial and Provincial) under these heads.

Capital Expenditure not charged to Revenue.

Revenue amounted to Rs. 28¼ lakhs against Rs. 56½ lakhs in the previous year. The decrease occurred under State Railways, mostly on the South Indian Railway system, due to the failure of contractors in England to complete their contracts and the restriction of shipping facilities.

Provincial revenues. *Part II, paras. 347 to 354.*

58. The Provincial account opened with a balance of Rs. 110¼ lakhs and closed with a balance of Rs. 110 lakhs ; the deficit of Rs. ·25 lakh was the net result of an aggregate revenue of Rs. 767½ lakhs and a total expenditure of Rs. 767¾ lakhs. The charges under Land Revenue were Rs. 123½ lakhs, showing a saving of Rs. 2 lakhs, mainly due to smaller expenditure under Charges of District Administration and to larger recoveries on account of estate surveys. The receipts of the Forest Department increased by Rs. 1¾ lakhs to Rs. 41 lakhs ; the increase was under sandalwood and timber, since the market improved and better prices were realized. The charges amounted to Rs. 29¼ lakhs against Rs. 28½ lakhs in the previous year and included a payment of Rs. 1·72 lakhs for the acquisition of Mudumalai and Kumbarakolli leased forests on the Nilgiris. The receipts under Registration rose by Rs. 75,000 to Rs. 23¼ lakhs and the charges rose slightly to Rs. 12·74 lakhs. Under the other Provincial heads receipts were Rs. 60 lakhs and exceeded the previous year's figures by Rs. 6 lakhs, the excess being distributed under Scientific and Miscellaneous Departments, and Civil Works in charge of Civil Officers, partly counterbalanced by a decrease under Jails. The expenditure under other Provincial heads declined by Rs. 53½ lakhs to Rs. 590¾ lakhs. There was a decrease of Rs. 85¾ lakhs under 9 heads and an increase of Rs. 32 lakhs under 13 other heads, the largest decreases occurring under Civil Works in charge of Civil Officers (Rs. 55¾ lakhs) and under Civil Works in charge of Public Works Officers (Rs. 20¼ lakhs). This was due in particular to the transfer of grants to local bodies from these heads to Education and Medical, and the transfer of the expenditure of the Pumping and Boring Department from Civil Works in charge of Public Works Officers to Agriculture and in general to the curtailment of expenditure in view of war conditions.

Land Revenue.

Forests.

Registration.

Other Provincial receipts and expenditure.

Local Funds. *Part II, paras. 355 to 369.*

59. The receipts and charges of Local Funds constituted under Act V of 1884 exclusive of debt transactions were Rs. 178¾ lakhs and Rs. 195¾ lakhs, respectively, leaving a deficit of Rs. 17 lakhs against a deficit of one lakh of rupees in the previous year. The receipts and charges on account of debt transactions were Rs. 30½ lakhs and Rs. 21¾ lakhs respectively.

Port and Marine funds. *Part II, paras. 359 and 360.*

60. The Madras Port Fund opened with a balance of Rs. 33,414 on 1st April 1915, and closed with a balance of Rs. 5,584. The income of the fund amounted to Rs. 89,952 and its expenditure to Rs. 1,17,782. The Minor Ports Fund opened with a balance of Rs. 1,06,921 and closed with a balance of Rs. 1,83,114 ; the receipts and charges of the fund were Rs. 5,11,674 and Rs. 4,35,481 respectively. The total security balance of these funds stood at Rs. 12,57,400 on the 31st March 1916. The income and expenditure of the Pilotage funds amounted to Rs. 10,288 and Rs. 10,614, respectively, the invested balance of the funds amounting to Rs. 1,72,100. The receipts and charges of the Landing and Shipping Funds came to Rs. 4,25,168, and Rs. 4,79,865, respectively, and the invested balance at credit of the funds was Rs. 3,96,400. The Madras Coast Lights

Fund opened with a balance of Rs. 65,712 and closed with a balance of Rs. 16,853, the invested balance of the fund being Rs. 1,23,400 on the 31st March 1916.

Municipal revenues. *Part II, para. 370.*

61. The receipts and charges of mufassal municipalities amounted to Rs. 79·82 lakhs and Rs. 85·45 lakhs respectively. The receipts and charges of the Madras Corporation amounted to Rs. 36·08 lakhs and Rs. 45·31 lakhs and the balance at its credit at the end of the year declined from Rs. 18·50 lakhs to Rs. 9·28 lakhs.

The working of the Abkari Department. *Part II, paras. 371 to 377.*

62. The consumption of intoxicants being one of the few luxuries generally available for the Indian, it was natural to expect the state of the year to be reflected in the sales of the various intoxicants and this year, the second year of the war, showed a remarkable decrease all round. The import duties on foreign liquor, beer and spirits, were considerably enhanced ; the duty on ganja and charas was also increased. The consumption both of toddy and arrack decreased largely and the revenue derived from these two sources fell from Rs. 324·26 lakhs to Rs. 307·70 lakhs. 573 arrack and 722 toddy shops were closed during the year. The manufacture of beer in the Presidency and at Bangalore continued to develop ; in many places the more expensive beer competed with toddy in popularity. There was a decrease of 10 per cent in the quantity of hemp preparations sold. An important innovation was that the employment of children under 16 in any capacity in excise shops and depôts was prohibited.

VI.—VITAL STATISTICS AND MEDICAL SERVICES.

Births and Deaths. (1915.) *Part II, paras. 379 to 385.*

63. For some unexplained reason both births and deaths decreased largely this year. The number of births registered represented an annual ratio of 31·2 against 33·5 per mille in 1914, the population according to the census of 1911 being 41,829,232 (exclusive of Europeans and Eurasians). The highest birth-rate was recorded in Guntūr (37·6) and the lowest, as in last year, in Rāmnād (21·9). There was a large excess of male over female births, and in all the districts except Madras the births exceeded deaths. The highest birth-rate (34·5) was among Muhammadans. The ratio of deaths during the year was 22·0 per mille as against 25 per mille in 1914, increased death-rate occurring in two districts, Salem and Vizagapatam ; the rate varied from 36·4 per mille in Madras to 15·5 per mille in Rāmnād and was heaviest among Hindus. The mortality among children under one year of age was 186·6 per mille of registered births against 196·5 in 1914. The Madras Registration of Births and Deaths Act III of 1889 was in force in 309 unions and 2,348 villages. Among diseases fever caused the highest mortality, accounting for 290,228 deaths, and there were 3,889 deaths from plague. The births and deaths in municipalities declined ; and it was satisfactory to note fewer deaths under cholera and dysentery.

Emigration and Immigration. (1915.) *Part II, paras. 386 and 387.*

64. Regulated emigration was confined to Fiji and British Guiana as in the previous year. Recruitment for Trinidad began in October and continued till the end of the year, but no shipments were made during the year. There was a marked increase in the number of passengers proceeding to the Straits Settlements and Burma, but the number of passengers

returning from the two countries showed a decrease ; this was attributed to greater demand and attractive wages obtainable for coolie labour in those places. The decrease in the arrivals from Ceylon was probably due to the absence of a daily steamer service between Colombo and Tuticorin, and to the fewer number of persons that proceeded to Ceylon in the previous year.

Medical relief. (1915).
Part II, paras. 388 to 391.

65. This year saw nine more institutions added to the number of hospitals and dispensaries in the Presidency. There were in all 697 institutions and 7·13 million persons claimed relief in 1915. Cholera was less severe, which would account for a slight fall in the percentage of deaths among the patients. As usual nearly 4 per cent of those seeking relief required operation. The surgical work showed an increase on the total of the previous year, partly due to the large number of operations performed for cataract and abdominal sections in the hospitals in the Presidency town. Of the operations performed 99 per cent were successful. The intention with which the appointments of house physicians and surgeons are made, appeared to be better understood by young graduates and the reports on those employed during the year were more satisfactory ; there were 18 of these officers in the Madras City hospitals and 9 in mufassal hospitals.

Medical College and Schools.
Part II, paras. 392 to 395.

66. There was a decrease in the total number of students in the Medical College and Schools. This was chiefly noticeable in the Royapuram Medical School and was due to the fact that no private pupils were admitted into the school during the year for want of accommodation in the first-year class. A new medical school was, however, opened at Calicut to provide for the increasing demand for medical education, and proposals for the enlargement of all the medical schools were engaging the attention of Government. The percentage of passes both in the University and in the final examinations was the highest recorded for five years ; the intellectual attainments of women students, however, did not reach such a high standard.

The Pasteur Institute, Coonoor.*
Part II, para. 396.

67. The number of patients at the Pasteur Institute was the highest on record ; it is the more satisfactory to note the number, 1,490, because fewer Europeans and Anglo-Indians were treated than in the last year ; these classes are well aware of the imperative necessity of going to the Institute when bitten by a rabid dog. The increase in Indian patients pointed to a wider dissemination of the knowledge of the treatment. The number of deaths among the patients was 13, and in 7 of these cases the deaths occurred 15 days after the close of the treatment. 22 per cent of the patients were children under ten years of age.

Lunatic Asylums. (1915.)
Part II, para. 397.

68. The accommodation provided in the Madras asylum was decreased by the conversion of twelve small back-to-back single rooms into six rooms by the removal of partition walls. At Calicut a new block of four cells for males under observation was completed during the year. The daily average population was 799·47. Admissions and readmissions numbered 268 of which 47 were females. The year was not as healthy as the previous year and the daily average of sick was 103·15. Dysentery was prevalent in the Madras asylum.

* 1st March 1915 to 29th February 1916.

69. At Chidambaram the provision of a piped water-supply was completed, so that there were 26 municipal towns thus protected. The minor sanitary works carried out consisted of the usual improvements to water-supply such as the construction and repair of wells and tanks, markets, slaughter-houses, etc., and the improvement of village-sites. There was an increase both in sanitary staffs and in conservancy plant, but no progress was made in sewage farming. The relief of congestion and town-planning received particular attention. Itinerating dispensaries for the treatment of malaria worked satisfactorily in the districts of Chittoor, Gōdāvari, Vizagapatam, Kurnool and Salem ; in Madras the work was carried out under the supervision of the Special Malaria Officer. The working of the three reserve parties of Sanitary Inspectors to check the spread of cholera in rural tracts was reported to be generally satisfactory. The Sanitary Board approved of 32 schemes, costing Rs. 12·13 lakhs on behalf of municipalities and local boards. It had five works in execution at a cost of Rs. 60,000, and was forced to postpone the execution of five other works costing Rs. 66,300 for want of funds. The Sanitary Engineer completed schemes for bringing water to, or constructing drainage works for, 11 towns ; 14 more schemes were under preparation and 25 were being investigated. 721 English pumps were distributed to district boards and filtration experiments were continued at Guindy.

Sanitation. (1915.) *Part II, paras. 398 to 400.*

70. The number of vaccinations performed by all agencies increased. Although the percentage of success both under primary and re-vaccinations showed a decrease, there were 3,851 fewer deaths from small-pox. Infantile vaccination made some advance.

Vaccination. *Part II, para. 401.*

VII.—INSTRUCTION.

71. Pending consideration of a scheme for the general reorganization of the inspecting staff, sanction was granted for the retention for another year of the 49 Sub-Assistant Inspectors already entertained, and for the establishment of an additional Girls' Range for a year. To improve the instruction in " Nature Study " in elementary schools, three officers of the department who had specialized in Botany, Zoology, Geology, etc., were deputed for special training and lecturing for a period of one year. It was resolved that recognition and aid be continued to educational institutions conducted or controlled by hostile missions till the end of 1916–17, as the Missionary educational Council of Southern India had agreed to undertake their management under certain conditions. Certain changes were made in the Madras Educational Rules and Grant-in-Aid Code. Enlarged powers were given to the Director and the Inspectors and Inspectresses in the matter of sanctioning building and furniture grants.

General administrative changes. *Part II, paras. 403 and 404.*

72. Public institutions increased both in number and strength, the increase being about 5 per cent in each case. The percentage of boys under instruction to the male population of school-age rose from 40·8 to 42·6, and the corresponding percentages for girls were 9·4 and 9·9. The expenditure on education increased from Rs. 193·5 lakhs to Rs. 206·5 lakhs, but deducting from the latter amount Rs. 11 lakhs which related to

General statistics and finance. *Part II, paras. 405 and 406.*

institutions under the control of other departments, there was an increase of Rs. 2 lakhs only. To meet the expenditure, public funds contributed 51 per cent and private funds 49 per cent. Imperial grants, both recurring and non-recurring, amounted to Rs. 21 lakhs, of which nearly Rs. 19·30 lakhs were spent. Grant-in-aid from Provincial funds amounted to Rs. 46·74 lakhs, of which Rs. 29·50 lakhs were paid to institutions under private management.

University and Collegiate education.
Part II, paras. 407 to 409.

73. Certain alterations in the regulations relating chiefly to the syllabuses of studies in the optional groups of the Intermediate course and also in those relating to the B.A. (Honours) Degree and the M.A. Degree (without Honours) were sanctioned, as well as transitory regulations providing for holding the F.L. and B.L. examinations under the old system in October 1916 and 1917. Mr. Gilbert Slater, M.A., D.Sc., who was appointed as University Professor of Indian Economics, delivered a course of public lectures on "Indian Economics" for the benefit of the students of the B.A. Honours class. The Women's Christian College, Madras, was affiliated to the University in Group III of the Intermediate courses and Groups IV and V of the B.A. Degree courses. The number of Arts colleges increased by one and their strength by about 220; nearly 400 students were undergoing the B.A. (Honours) course.

Secondary education. (Boys.)
Part II, para. 410.

74. Public secondary schools for boys increased by 7 in number and over 7,000 in strength. The direct expenditure on secondary schools increased by over Rs. 2½ lakhs. Non-recurring grants to the extent of nearly Rs. 2 lakhs were paid for furniture, buildings and hostels. The recurring Imperial grant of Rs. 80,000 sanctioned for the improvement of secondary education was fully spent.

Elementary education. (Boys).
Part II, para. 411.

75. Public elementary schools for boys again increased both in number and strength; the advance was shared by all the three grades of elementary schools, but there was a marked increase in the case of schools having standards above the fourth. The proportion of boys in public elementary schools to the boys of school-age rose from 32·7 per cent to 34·3 per cent. A large portion of the Imperial grants was placed at the disposal of local boards and municipalities for the improvement of elementary education. Nearly 700 buildings were constructed for the housing of public elementary schools.

Special education.
Part II, paras. 412 to 414.

76. The number of teachers under training in training schools decreased slightly. Including the industrial and other technical schools under the control of the Director of Industries, there were 4,600 pupils receiving instruction in technical or industrial subjects. Some fine exhibits were contributed by some of the industrial schools to the People's Park Exhibition held in December and January.

Female education.
Part II, para. 415.

77. There was a further increase both in number and strength of non-European schools for girls; including those in schools not solely intended for them, the number of girls increased by about 16,500. A fair percentage of Brahman and Muhammadan girls received secondary education. There were nearly 100 students reading in the three colleges for women. The Government College for Women was, after the close of the year, raised to the first grade by the opening of the third year or junior B.A. class, but the question of its affiliation was still before the University.

78. The number of schools intended for Europeans remained the same, but the number receiving instruction increased by nearly 250. In the case of boys, the results of the European school examinations were better, but in the case of girls they were not so satisfactory as compared with those of the previous year. Funds provided annually from the Imperial grants for the education of the domiciled community were fully utilized, and the accommodation and equipment in these schools continued to improve.

European education. *Part II, para. 416.*

79. The average strength of the school rose from 247 to 250; of the 64 new admissions 12 belonged to the criminal classes. The general health of the pupils improved in a marked degree; 70 per cent of the pupils discharged during the year obtained employment and 60 per cent were following the trade taught to them in the school. The results of the Government technical examinations constituted a record of passes for the school.

Reformatory School, Chingleput. (1915.) *Part II, para. 422.*

80. At the Technical examinations there was an increase in the number of candidates examined in the case of the elementary grade, as also in the numbers and percentages of subject-passes relating to the advanced and intermediate grades. There was a slight decrease in the number of examinees at the Special Test examinations, but the results were better than those of the previous year in a large number of tests. The receipts more than covered the expenditure.

Government examinations. *Part II, para. 423.*

81. There was no change in the strength of either branch of the school. Both the boys' and girls' branches acquitted themselves satisfactorily in the High School examination, but the results of the Middle School examination were disappointing, particularly in the case of the girls. The general condition and tone of the school was satisfactory.

Lawrence Memorial School. (1915.) *Part II, paras. 424 and 425.*

82. There was an increase in the total strength as well as in the average attendance. The improvement in attendance was probably due to the new distribution of holidays which nearly coincide with those of other schools in the city. The results of the Government Technical examinations were satisfactory, the percentage of passed to those examined being 77 against 75 in the previous year. Another satisfactory feature was the valuable assistance rendered by the Superintendent and the staff to the Exhibition at the People's Park during December 1915 and January 1916.

School of Arts. *Part II, para. 426.*

83. The daily average number of readers in the Connemara Public Library was 56. 500 standard works were added and a fifth supplement to the catalogue of books under authors' names was published in the year. The search for manuscripts was continued by the peripatetic party working under the Oriental Manuscripts Library.

Libraries. *Part II, para. 428.*

84. Both the number of periodicals and the circulation of newspapers decreased rapidly in 1915 owing to the difficulty in finding sensational news about the war. The tone of the press towards the war and matters in general was, with one notable exception, satisfactory. The provisions of the Press Act were used sparingly, and there were only two prosecutions, both for technical offences.

Periodicals. (1915.) *Part II, para. 429.*

85. The number of books and periodicals registered, which had been steadily increasing up to 1914–15, showed a decrease during the year. This was presumably due to the retardation of printing and publishing activity

Registration of books. (1915.) *Part II, para. 430.*

on account of the war. Of the publications nearly two-thirds were in the vernaculars ; religious publications continued to be the most numerous, but a number of works in the vernaculars were also written on the subject of the present war.

Government Museum and Marine Aquarium.
Part II, paras. 431 to 435.

86. The Hindu and Jain sculptures, the rearrangement of which was completed last year, were identified and labelled. Considerable accessions have as usual been made to the different sections of the Museum. The demonstrations to pupils and teachers in Madras schools were continued. The second volume of the late Mr. R. Bruce Foote's Catalogue of the Collection of Indian Prehistoric and Protohistoric Antiquities, dealing with their age and distribution, and Mr. A. Rea's Catalogue of the Prehistoric Antiquities from Adichanallur and Perumbair were published. The Marine Aquarium as usual attracted a large number of visitors.

Meteorology.
Part II. para. 436.

87. During the year the observatory on Dodabetta was closed and a new observatory was constructed in Koraput. No observations have been made there as yet. 22 new rain-recording stations were added, 19 being in Travancore. The necessary inspections were carried out.

Astronomy. (1915.)
Part II, para. 437.

88. At the Madras Observatory observations were mainly confined to those necessary for maintaining an accurate time service and this work was efficiently performed throughout the year. The Kodaikānal Observatory was devoted chiefly to solar work, but complete meteorological, magnetical, and seismetric records were also maintained. Other astronomical observations were also made when matters of special interest were involved.

VIII.—ARCHÆOLOGY.

Archæology.
Part II, para. 438.

89. A sum of Rs. 29,713 was spent on conservation works. Repairs to the more important monuments at Hampi were completed. Two illustrated articles on the "Origin of the typical Hindu temple of Southern India" and the "Mahendragiri temples in the Ganjām district" were published in the annual report. Many new photographs were added to the existing collection, but no excavation work was undertaken.

Epigraphy.
Part II, para. 439.

90. 835 stone inscriptions and seven copper plate records were examined and transcribed. The chief discoveries were an Andhra inscription of the time of Pulumāvi II and a set of Pallava copper plates. The collection of materials for *South Indian Inscriptions*, Volume III, Part III, was in progress and Part V of Volume II was almost ready for publication.

IX.—MISCELLANEOUS.

Ecclesiastical.
Part II, paras. 441 and 442.

91. At the end of the year there were in all 280 clerks in Holy Orders officiating under the licences of the Bishop of Madras and the Bishop in Tinnevelly and Madura. During the year three Indians were ordained priests by the Bishop of Madras and four Indians by the Bishop in Tinnevelly and Madura. The Bishop of Dhornakal ordained on behalf of the Bishop of Madras five deacons and eleven priests, all Indians. Seven clergymen were licensed to officiate in the Diocese of Madras and one clergyman was licensed to officiate in the Diocese of Tinnevelly and Madura. The establishment of the Church of Scotland consisted of three chaplains.

92. The value of stores received during the year amounted to Rs. 8·16 lakhs against Rs. 9·60 lakhs in 1914–15. The decrease occurred both under English and under Indian stores. The Home Indent could not be complied with completely during the year, and an indent for brown paper from the Indian mills was only partially fulfilled. There was a slight fall in the value of stores issued, due perhaps to increased economy in offices.

Stationery. *Part II, para. 443.*

93. There was again a fall in the receipts of the Government Press. There was a rise in prices of stores and plant, and in addition the cost of railway freight for forms despatched was this year debited to the Press; thus expenditure increased by half a lakh. The number of standard pages turned out increased, but there was a decline of 31 millions in the number of impressions. This decline was a return to normal conditions, since there was an extraordinary increase in the number of impressions taken in the previous year. The total number of impressions this year was, however, slightly above the figure for 1913–14. The Penitentiary turned out much less work than usual owing to the lack of suitable convicts.

Government Press, Madras. *Part II, paras. 444 to 447.*

94. The work done by the Chemical Examiner's Department showed no considerable variation when compared with the working of the previous year. In many cases although poison was detected at the examination, the evidence before the Court was not sufficient to warrant a conviction. 267 cases were examined for blood and semen and in 102 cases the accused were convicted.

Chemical Examiner's Department. (1915.) *Part II, paras. 448 to 451.*

95. In spite of increased facilities for travel, the building of chatrams and halting places for travellers continued, and this year the opening of 64 new charitable institutions in the Presidency brought the total up to 3,071. The income amounted to Rs. 15·59 lakhs, and in addition to this some institutions possessed grain endowments which have not been valued in the total income. Two-thirds of the charities were maintained from subscriptions and donations from the general public and from endowments. Of the remaining institutions some were supported by Government, some partly by Government and partly by the public and the remainder by local bodies. 1,965 institutions were maintained for providing travellers with accommodation, which usually included free rations of cooked or raw rice and condiments; 593 institutions were maintained exclusively for Brahmans and Byragis. So far as accurate figures were available, it would appear that 12¼ millions of persons were aided, showing that about one in every thousand of the population was in daily receipt of relief.

Charitable institutions. *Part II, paras. 452 to 454.*

96. As in previous years, by far the greater number of Muhammadans who entered the superior service of Government joined the police force; 613 Muhammadans entered the police force and 47 joined other departments. This brought the total number of Muhammadans in Government service to 8,565, which was slightly in excess of the two previous years; the percentage of Muhammdans to the total number employed was 14·14 as against 13·78 in 1914–15.

Muhammadans in the service of Government. *Part II, para. 455.*

PART II.

DEPARTMENTAL CHAPTERS, ETC.

PART II.

CHAPTER I.

PHYSICAL AND POLITICAL GEOGRAPHY.

PHYSICAL.

PHYSICAL FEATURES OF THE COUNTRY, AREA, CLIMATE AND CHIEF STAPLES.

1. *Vide* pages 1 to 10 of the Report on the Administration of the Madras Presidency during the year 1911–12.

POLITICAL.

HISTORICAL SUMMARY.

2. *Vide* pages 11 to 33 of the Report on the Administration of the Madras Presidency during the year 1911–12.

FORM OF ADMINISTRATION.

3. *Vide* pages 34 to 54 of the Report on the Administration of the Madras Presidency during the year 1911–12.

CHARACTER OF LAND TENURES.

4. *Vide* pages 55 to 60 of the Report on the Administration of the Madras Presidency during the year 1911–12.

SYSTEM OF SURVEY.

5. *Vide* pages 61 to 72 of the Report on the Administration of the Madras Presidency during the year 1911–12.

SYSTEM OF SETTLEMENTS.

6. *Vide* pages 73 to 86 of the Report on the Administration of the Madras Presidency during the year 1911–12.

CIVIL DIVISIONS OF THE BRITISH TERRITORY.

7. *Vide* pages 87 to 100 of the Report on the Administration of the Madras Presidency during the year 1911–12.

DETAILS OF THE CENSUS OF 1911—TRIBES AND LANGUAGES.

8. *Vide* pages 101 to 104 of the Report on the Administration of the Madras Presidency during the year 1911–12.

CHANGES IN THE ADMINISTRATION. (1915-16.)

9. There were no changes in the personnel of the Executive Government during the year.

RELATIONS WITH THE TRIBUTARY STATES AND FRONTIER AFFAIRS.

TRAVANCORE STATE.

(M.E. 1090—17TH AUGUST 1914 TO 16TH AUGUST 1915.)

[*Report on the Administration of the Travancore State for the year 1090 M.E.*]

[The Maharaja of Travancore is a Kshatriya. His age is 59. He has a male heir. The area of the State is 7,129 square miles and the population according to the census of 1911 is 3,428,975. The annual subsidy paid to the British Government is Rs. 8,10,652. The gross revenue is estimated at Rs. 1,49,14,987.]

Political.

10. In October 1914, His Excellency the Governor of Madras, accompanied by Her Excellency Lady Pentland, visited Travancore, in response to the invitation of His Highness the Maharaja. In July 1915, at the invitation of His Highness, His Highness the Maharaja Gaekwar of Baroda, accompanied by Her Highness the Maharani, paid a visit to Travancore.

General.

11. The expenditure of the year (ordinary), viz., Rs. 1,62,21,520 exceeded the revenue and receipts, viz., Rs. 1,49,14,987 by Rs. 13,06,533. The capital expenditure on the extension of the railway from Quilon to Trivandrum, which was not charged to revenue and receipts, amounted to Rs. 13,45,020. The transactions of the year under report thus resulted in a total deficit of Rs. 26,51,553, reducing the Darbar balance to Rs. 49,02,047. Many of the European markets for the products of Travancore have been shut out ; freights have increased heavily, and the difficulty of procuring tonnage has been great. In consequence the Darbar revenue under Customs, Stamps and Registration fell during the year. The other heads of revenue, however, continued to maintain their steady growth. It was remarkable that the consumption of arrack fell by nearly 20 per cent ; the fall was mostly on the sea board and reflected the depression of trade that occurred during the year. The gross revenue from Forests continued to rise ; in the last five years it has increased by 61·1 per cent. The revenue from Excise was also expanding rapidly owing to the suppression of illicit liquor traffic ; the amount of liquor consumed remained steady. The amount payable by the Darbar to the South Indian Railway Company to make up the guaranteed interest to the debenture-holders of the Quilon-Shencotta section of the Tinnevelly-Quilon Railway has risen ; it was Rs. 1·21 lakhs in 1088, Rs. 1·05 lakhs in 1089 (for nine months), and Rs. 3·05 lakhs in 1090 for 18 months. It is now as high as it was in 1085.

Administration.

Land Revenue.

12. The current demand was Rs. 35·84 lakhs, showing a decrease of Rs. ·64 lakh on the demand on wet lands. Remission was half that given in 1089 and the collection on account of the current demand amounted to 99 per cent against 98 in 1089. Compared with 1089, there was a substantial increase in the volume of coercive action taken under all the heads, owing to the scarcity of money.

Protection and Legislation.

13. Four ordinary meetings of the Legislative Council were held during 1090. Nine Regulations were passed by the Council during the year, one of the most important being a Regulation to provide for the establishment of Village Panchayat Courts. Besides the above, a Regulation was passed direct by His Highness the Maharaja to amend the Code of Criminal Procedure. A Bill to make better provision for the extension of Elementary Education in Travancore was also introduced into the Council, but was thrown out by a majority.

Police.

14. At the end of the year the actual strength stood at 1,854. There was a decrease of 23 in the number of policemen prosecuted, as compared with 1,089. The percentage of conviction was 4. Although 56 policemen were prosecuted by the public, not one of these prosecutions ended in conviction. The total number of cognizable cases for disposal was 3,858, out of which 886 were referred as false, 502 transferred to the undetected list and 2,110 were charged. As in the Presidency there was an increase under all heads of crimes, except under "culpable homicide."

Jails.

15. 902 prisoners, consisting of 734 convicted, 105 under-trial, and 63 civil prisoners, were admitted into the prison.

Criminal Justice.

16. Seventy-four courts exercised criminal jurisdiction, which was four more than in the previous year. The number of offences reported fell from 19,618 to 19,353, of which 14,082 were offences under the Penal Code and 5,271 under Special and Local Laws. The number of juvenile accused rose from 194 to 204. The number of public servants prosecuted and the number convicted fell from 246 and 17 to 179 and 8, respectively ; out of 163 prosecutions started by private individuals only one ended in conviction. The file of the Magistracy fell from 19,618 to 19,353. As in the previous year 74 per cent of the persons convicted were sentenced to fines only. Twelve Magistrates exercised appellate jurisdiction, and there were 1,621 appeals for disposal, of which 1,588 were disposed of. 201 cases were committed to the Sessions Courts, and of the 527 persons involved, 35 per cent were convicted ; the appeals fell from 582 to 522. The High Court dealt with 10 referred cases, 198 appeals and 493 revision cases.

Civil Justice.

17. In the 44 Civil Courts, taking original suits and appeals, there was a decrease of 2,410 cases, which was remarkable when compared with the enormous increase of litigation in the Presidency. In the Munsifs' Courts the institutions of the year fell from 63,461 to 60,563, there being a decrease under both ordinary suits and small causes ; the arrears also fell from 19,408 to 18,732. The number of suits of between one and two years' pendency rose from 3,914 to 4,525 and those of more than two years' pendency from 892 to 987. The average duration of contested cases disposed of rose from 8 months and 5 days to 9 months and 24 days ; this showed an increase of 3 months in two years. In the District Courts the number of ordinary suits instituted during the year went down from 805 to 737 ; the disposals rose from 679 to 730 and were short of the actual institutions by 36. The average duration of contested suits disposed of rose from 13 months and 25 days to 16 months and 25 days. The decrease in the original litigation in the Munsifs' Courts was noticeable in almost all grades. In the High Court the institutions of the year numbered 544 first appeals and 529 second appeals, against 513 and 499 respectively in 1089. The disposals were 44 per cent of the cases against 54 in the year preceding.

Registration.

18. The total number of documents presented for registration and the aggregate value of the transactions fell. The decrease was due mainly to the general poverty of the people in the Quilon and Kottayam districts

as the result of the depression of the trade in the products of the coconut tree. The ratio of the expenditure to the gross income in 1090 was 41 per cent against 35 per cent in 1089.

Production and Distribution.

19. The season was not on the whole a good one. The prices of food-grains and the wages of labour were higher than in 1089. Experiments on sericulture were continued in the Silk Farm at Trivandrum. The experiments left no room for doubt as to the feasibility of carrying on silk-worm culture in Travancore in about six months of the year, when there is neither severe drought nor heavy rain, and the people are being persuaded to take interest in this new industry. The cultivation of ground-nut and guinea grass, newly introduced in the country, progressed steadily. In spite of the pecuniary difficulties caused by the war, the coconut cultivators resorted to the Darbar manure depôts for the purchase of manures. Considerable success was also attained in conserving within the country oil-cakes and prawn skin for manurial purposes. The opposition of the ryots to the use of the light iron ploughs is being gradually overcome.

Factories.

20. At the end of the year there were 86 factories, against 84 in the previous year; of these, 39 were for tea-making. Three of the five factories in the Devicolam division were worked by electric power. The total number of operatives at work was 6,026, including 875 women and 1,309 children.

Trade.

21. The value of the exports was British Rs. 4,18,20,726 and that of the imports British Rs. 2,93,36,797. Ten per cent of the external trade was by sea, 54 per cent by backwater and 36 per cent by land. There was a large decrease in the export of copra, coir, coffee and ginger, but this was counterbalanced by increases under the heads of tea, rubber, coconuts and coconut oil. Generally, however, the trade in the produce of the coconut tree, the duty on which alone formed 69·4 per cent of the collections from dutiable exports, showed a decrease of Rs. 39,78,088. The total value of the rice and paddy imported was Rs. 1,31,42,751. As usual the bulk of the trade was with British India.

Public Works Department.

22. The expenditure on Public Works amounted to Rs. 38,50,872. One lakh was spent on the Kodayar project works, the total outlay on the project up to the end of 1090 being Rs. 80 lakhs; 43,887 acres were under irrigation. Rs. 4·37 lakhs were spent on the maintenance of main roads; the average cost of maintenance was Rs. 173 per mile; on new roads and canals Rs. 10·27 lakhs were spent.

Railways.

23. The Railway from Shencottah to Quilon continued to work at a loss. All the lands required for the Quilon-Trivandrum extension of the Tinnevelly-Quilon Railway were acquired and handed over to the South Indian Railway Company; the work of the construction of the line was in progress. The amount spent by the Darbar on account of the extension in 1090 was Rs. 13,45,020, against Rs. 5,30,065 in 1089, the total expenditure till the end of 1090 being Rs. 18,75,085.

Anchal.

24. There were 211 offices and 294 letter boxes and the total length of the mail line was 1,285 miles, against 1,284 in 1089. The receipts were Rs. 1·90 lakhs and the cost of the department Rs. 1·74 lakhs. Both figures are increasing yearly, increased expenditure being chiefly due to a larger staff. The Savings Bank system was introduced in five more Anchal ffices; 29 offices were doing Savings Bank work and 2,005 new accounts were opened, making a total of 4,689 accounts. This system was newly introduced in 1088 and seems to be meeting with a large measure of success.

Vital statistics and Medical services.

25. The number of births registered during the year was 72,380 and the number of deaths 46,754 against 73,515 and 45,890 respectively in 1089. The birth and death rates were 21·1 and 13·6 per mille, respectively, against 21·4 and 13·4 in the preceding year.

Diseases.

26. There was a further decrease in mortality from cholera. 12,648 infants were successfully vaccinated during the year against 9,589 in 1089, the percentage to registered births being 17·4 against 13·4 in the previous year. Mortality from small-pox decreased from 304 to 223.

27. Twenty-two hospitals and 31 dispensaries gave medical relief to 751,688 persons. There was an increase in the number of out-patients treated. The average number of cases attended by the midwives, of whom there were 49, was 74. Medical services.

28. It is the intention of the State that the schools should be open to all classes, but six schools for special classes were also opened. To encourage Muhammadans to send their children to school 74 local committees were formed. Taking the number of children of school-going age to be roughly 15 per cent of the total population, 51·1 per cent of the number of school-going age were actually attending schools against 43·8 per cent in 1089. The number of colleges affiliated to the University of Madras was five, and their strength rose from 697 to 750. The number of recognized secondary schools rose from 76 to 79 and their strength from 17,056 to 18,840 ; many new elementary and girls' schools were opened. **Education.**

COCHIN STATE.

(M.E. 1090—17TH AUGUST 1914 TO 16TH AUGUST 1915.)

[*Report on the Administration of the Cochin State for the year 1090 M.E.*]

[The Raja is a Kshatriya. He is 57 years of age and has male heirs. He pays a tribute of Rs. 2,00,089 and maintains a military force of 290 men. According to the census of 1911 the population of the State was 918,110. The gross revenue of the State was Rs. 46·20 lakhs. The Resident for Travancore is also the Resident for Cochin.]

29. The abdication of His Highness Sri Sir Rama Varmah, G.C.S.I., G.C.I.E., and the installation of His Highness Rama Varmah were the outstanding events of the year. His Highness Sir Rama Varmah's desire to retire into private life was fulfilled on the 7th December 1914. The period which ended with the abdication of the Raja was a notable record of steady advance in progress in the varied domain of civic life and in every one of those beneficent reforms which make for the relief of man's estate. His Highness was succeeded by his cousin Rama Varmah, Elaya Raja, who was duly recognized by the British Government as lawful heir and successor and was formally installed by the British Resident Mr. A. T. Forbes, I.C.S., at a public Darbar held in the palace at Mattanchery on 21st January 1915. His Excellency Lord Pentland, the Governor of Madras, accompanied by Her Excellency Lady Pentland, visited the State in October 1914. Their Highnesses the Maharaja Gaekwar and the Maharani of Baroda visited the State during the year. Mr. A. T. Forbes, I.C.S., continued to be British Resident till 8th March 1915, and Mr. R. A. Graham, I.C.S., was acting Resident from 25th March 1915 till the end of the year. Mr. J. W. Bhore, I.C.S., held the office of Diwan. **General and Political.**

30. The fall in receipts, which was caused by a diminution in the ordinary transactions of business and trade and the grant of revenue remissions—both indirect consequences of the war—accompanied increased and unexpected demands on the State purse. The demand for coconuts and coconut products shrank to a negligible quantity. The estimates anticipated a total expenditure of Rs. 48·14 lakhs against an expected income of Rs. 46·12 lakhs, and that there was a surplus of Rs. 1·60 lakhs was not due to an increased revenue, but to the non-expenditure of large amounts provided in the budget. The expenditure was Rs. 44·60 lakhs, and the receipts under all heads were Rs. 46·20 lakhs : compared with the actuals of the previous year the revenue for 1090 showed a decrease of Rs. 86,844, and this was chiefly noticeable under the heads Land Revenue, Stamps and Forests. Receipts under Forests fell by one lakh due to the fact that no new coupes were opened and that there was no sale of land for plantation purposes. The State had at the end of the year a net asset of Rs. 13·62 lakhs after providing for all liabilities, against Rs. 12·02 lakhs at the beginning of the year. **Finance.**

Legislation. 31. Four Regulations were passed during the year, one being framed to define the law relating to landlord and tenant. Six legislative measures were under the consideration of the Darbar.

Village Panchayats. 32. Five more village panchayats were constituted bringing the total number up to ten. These panchayats were still in their infancy and were gaining executive experience, and gave promise of efficiency in the future.

Administrative changes.

Anchal. 33. In the Anchal Department the question of introducing the value payable system was under consideration.

Production and Distribution. 34. Owing to the depression of trade in the southern part of the State caused by the outbreak of the war, distress prevailed to some extent among the working classes and four works were undertaken as relief works and employed a large number of labourers.

Effect of the war.

Land Revenue. 35. The total area under cultivation was 498,499 acres, 206,864 acres being under wet or paddy. The total current demand for the year under Land Revenue proper was Rs. 10,71,359 as against Rs. 10,67,709 in 1089. The demand under Land Revenue, Miscellaneous, fell from Rs. 86,280 to Rs. 63,799 ; the large difference under this head was due to the fact that receipts under fisheries were newly shown under a separate head. The Land Revenue amounted to Rs. 11,77,860, or 99·9 per cent of the demand.

Diseases of the arecanut and coconut trees. 36. The spraying of arecanut trees to prevent the spread of "Mahali" disease was carried on on an elaborate scale by a special staff of field men appointed for the purpose. The result of the investigation into the coconut palm disease was communicated to the Darbar and arrangements were made for adopting remedial measures.

Co-operative societies. 37. Including the Ernakulam Town Co-operative Bank, eight co-operative societies were registered during the year, and at the end of the year there were eleven societies in working order. Almost all the loans issued were for productive and useful purposes ; they amounted to Rs. 10,067.

Loans. 38. A set of rules was framed by the Darbar for regulating the advance of loans up to a maximum of Rs. 2,000 from State funds for financing co-operative societies under certain conditions which ensured self-help.

Fish-curing yard. 39. Fish-curing operations showed an appreciable increase and 30,862 maunds were cured ; a reason for the increase was the reduction in the fish specially treated and sold as manure in British Cochin and elsewhere, the fish being taken to the yard instead. The yard still worked at a slight loss.

Forests. 40. The forests continued to be worked under the system of selection felling by extraction of timber of specified girths, the trees being marked by the department. The growth of the rubber plants in all the estates as well as the yield was found to be very satisfactory. The net revenue of the department for the year amounted to Rs. 3,31,098, against which had to be set off a sum of Rs. 1,15,135 on account of the maintenance charges of the forest tramway for the year, which was debitable to the Forest Department. The actual net revenue therefore was Rs. 2,15,963 as against Rs. 2,10,978 in 1089.

Tramway. 41. Three new sidings were put up to facilitate loading operations. The cost of maintenance was Rs. 1·15 lakhs and the receipts under private traffic amounted to Rs. 23,435 showing a decrease of Rs. 2,000.

Railway. 42. The State Railway was worked by the South Indian Railway Company. The gross earnings amounted to Rs. 6·68 lakhs and the net earnings gave a return of 3·84 per cent on the capital outlay.

Protection. Police. 43. The permanent establishment of the force consisted of 90 officers and 491 men, the ratio of effective police to population and area being 1 to 1,651 persons and 1 to 2·54 square miles. There was no one in the force who was not able to read and write. The River Police, sanctioned in 1089 to put a stop to cargo thefts in the backwaters, was organized during the year. The number of cases under the Penal Code and local and special

laws was 1,075 as against 1,149 in 1089, and the percentage of convictions to charged cases rose from 83·5 to 87·9. There was a great increase in the number of grave crimes reported during the year (549 against 461 in 1089). The amount of lost property recovered was 67·77 per cent as against 56·5 per cent in 1089. The average cost of a policeman was Rs. 201·73, and the net cost per head of population was two annas.

Criminal Justice.

44. 3,146 cases were disposed of by the Magistrates and the percentage of convictions rose from 28·35 in 1089 to 32·9. 31·7 per cent of the appealable decisions of the Second-class Magistrates were appealed against as against 30·2 per cent in 1089 ; of these, the appeals in 56·5 per cent were confirmed. In the Sessions Courts 24 cases were disposed of. The expenditure under criminal justice amounted to Rs. 55,072 as against Rs. 53,271 in 1089.

Jails.

45. The number of convicts, under-trials and civil prisoners admitted during the year was 393, 34 and 78, respectively. The convicts were as usual supplied with clothing manufactured in the Central Jail. The coir industry had to be stopped on account of the lack of demand for this article ; the cotton industry also suffered on account of the destruction of the weaving accessories by an accidental fire.

Civil Justice.

46. The total number of suits instituted and appeals filed in the year was 13,491 and 922, respectively. This was about the same as the previous year. The Munsifs disposed of 13,015 cases. Out of the 1,041 cases pending at the end of the year, 7 were over two and 5 over three years old. The District Judges disposed of 604 appeals leaving arrears of 283, as against 591 and 228, respectively, in the previous year. The average duration of contested regular and second appeals disposed of by the Chief Court was 11 months and 15 days, and 8 months and 1 day, respectively. 296 original suits were decided and 240 left pending.

Registration.

47. The number of registry offices was 17 and 44,340 documents were registered, showing a decrease of 5,000 on the previous year.

Vital statistics and Medical services.

48. Compulsory registration of births and deaths under Regulation II of 1081 was in force in the same towns as in the previous year. The number of births registered was 16,489 as against 16,830 in 1089. The total number of deaths was 10,486 as against 12,984 in 1089. The percentage of births and deaths to population was 1·79 and 1·14. Public health was satisfactory, there being no violent attack of any of the epidemic diseases ; deaths from cholera fell from 538 to 41.

Medical relief.

49. The opening of the Anthikad Dispensary raised the number of medical institutions in the State at the end of the year to 26, viz. 10 hospitals, 14 dispensaries and 2 asylums. Nearly 300,000 patients were treated. The number of patients treated by female medical subordinates decreased largely from 60,000 to 45,000 owing to the discontinuance of female services at Ernakulam General Hospital. The three veterinary institutions continued to work with success. The total expenditure on account of medical relief, including the two asylums and the three veterinary institutions, rose by Rs. 5,500 to Rs. 1,21,280.

Sanitation and Conservancy.

50. As in the previous year there were six towns under health officers. The compulsory scavenging system continued to work in some of the towns. Lighting was done departmentally.

Work of the Town Councils.

51. All the four Town Councils were working satisfactorily. The total Government contribution to these Town Councils for the maintenance of roads was Rs. 62,200. The scheme for providing the town of Ernakulam with drinking water from the Periyār river by means of pipes was nearing completion. 37,823 vaccinations were performed, and of these 90·60 per cent were successful as against 85·92 per cent in the previous year.

Vaccination.

Public Works.

52. The expenditure under State Public Works was Rs. 6,93,190 as against the budget grant of Rs. 6,98,400. There was increased expenditure,

due to the completion of a larger number of costly works undertaken in previous years and also to the starting of relief works. Six new roads were opened and 480 miles of road were under the maintenance of the department.

Instruction.

53. The net expenditure by the State on education was Rs. 3,77,289, or Rs. 53,264 more than in 1089. The rise in the cost of education presented a serious problem to the administration. The income of the State is not increasing and under the head of Forests must inevitably decrease. In spite of the liberal policy of the State in the spread of education there is a growing demand for still further facilities, which can only be met by a retrenchment in some other branch of the Public Service. The total number of State schools was 131 as against 132 in the previous year, but the number of aided schools rose from 158 to 162. The total number of pupils receiving instruction was 67,096 as against 63,810 in the previous year ; 36·1 per cent of the educational work was done by the State institutions. The percentage of boys and girls to the male and female population was 68·3 and 29·3 as against 73·2 and 31·6, respectively, in 1089. Upper secondary education was imparted in 14 schools as in the previous year, of which eight were State schools. The strength of the High School departments of the eight State High Schools rose from 912 to 941. The number of aided high schools was six. The grants-in-aid given by the State to the high school departments amounted to Rs. 5,808 as against Rs. 4,174 in 1089, the average cost to the State per pupil instructed being Rs. 12 as against Rs. 9 in the previous year. The number of schools in which lower secondary instruction was imparted was 32. Primary education was given in 1,329 schools as against 1,319 in the previous year. There were two fully developed high schools for girls. The actual amount of grant disbursed was Rs. 1,08,349 as against Rs. 64,985 in 1089. The increase in grants was due to the employment of better qualified teachers, to the raising of the pay of the teachers of the last grade and to the considerable increase in the grant under furniture, apparatus, etc. Besides grants-in-aid to schools a sum of Rs. 14,405 was spent out of the Educational budget for stipends and scholarships.

Military.

54. Including the Infantry and Artillery, the Nayar Brigade consisted of 25 officers and 244 men.

PUDUKKŌTTAI STATE.

(FASLI 1325—1ST JULY 1915 TO 30TH JUNE 1916.)

[*Report on the Administration of Pudukkottai for fasli 1325.*]

[The Raja, His Highness Sri Brihadamba Das Raja Sir Martanda Bhairava Tondaiman Bahadur, G.C.I.E., is a Kalla by caste and is 40 years of age. The population of the State according to the census of 1911 is 411,878. The Raja pays no tribute and maintains a military force of 110 infantry and 19 cavalry. The Collector of Trichinopoly is ex-officio Political Agent for the State.]

General.

55. On 10th August 1915, His Highness the Raja married Miss E. M. Fink of Melbourne at Sydney, Australia. His Highness returned to Pudukkōttai in November 1915 and remained in India until the middle of April 1916. Mr. J. T. Gwynn, I.C.S., resigned the office of State Superintendent on 12th October and was succeeded by Mr. Sidney Burn, I.C.S. M.R.Ry. Vijaya Raghunatha Durai Raja Avargal, B.A., was Diwan throughout the year. The Legislative Advisory Council met once and passed five Regulations.

Revenue and Finance.

56. The revenue of the State maintained a steady increase under nearly all heads and the total rose from Rs. 18·31 lakhs to Rs. 18·71 lakhs. The receipts were Rs. 1·25 lakhs more than the budget estimate and the increase was contributed mainly by Land Revenue, Excise and Stamps ; half a lakh was obtained by sale of waste lands and the grant of full patta rights in cultivated lands at the disposal of the State. The expenditure

was normal and totalled Rs. 18·60 lakhs ; excluding the extraordinary expenditure of the previous year it increased by half a lakh, chiefly because more work was done on the new palaces. The fasli closed with a cash balance of Rs. 28·50 lakhs, of which Rs. 10 lakhs were invested in Government securities and the remainder was held in Bank deposits ; this balance is reserved to finance the Pudukkōttai railway. The expenditure on Public Works was Rs. 6·56 lakhs ; Rs. 1·12 lakhs were spent on irrigation and 14 large and 225 small tanks were repaired ; Rs. 2·72 lakhs were spent on the new palaces at Pudukkōttai and Trichinopoly and Rs. ·97 lakh on the maintenance of roads. The season was not altogether favourable, for the rain, though sufficient, was unequally distributed and the prices of food-grains except paddy were higher than usual. In spite of this, however, 95·30 per cent of the arrears was collected or written off, and of the current demand under Land Revenue, which rose by Rs. ·36 lakh to Rs. 10,15,826, 99·41 per cent was either collected in the fasli, written off, or adjusted. An additional Rs. 17,084 were realized from the sale of house-sites and the redemption price levied on agricultural lands converted into house-sites in Chetti nathams. The expend iture under Land Revenue was Rs. 1,10,384, or 10·90 per cent of the actual collections. The number of co-operative societies increased from 14 to 21 and their capital from Rs. 1 lakh to Rs. 1·82 lakhs, and to this was attributed the falling off in the applications for State loans ; the amount lent decreased from Rs. 9,265 to Rs. 2,675. Rs. 17,568 were spent on the inam survey ; this was undertaken in fasli 1323 to facilitate the collection of quit-rent in inam villages, and at the end of this fasli two-thirds of the work was completed. The natham settlement operations, which were suspended on the outbreak of war owing to the general dislocation that occurred in the Chetti communities, were resumed and about half the work was finished.

Abkari Department.

57. The tax on toddy trees was enhanced by 50 per cent and under all heads the income from Abkāri expanded so that the revenue increased by Rs. 32,000.

Law and Justice.

Criminal Justice.

58. In the Sessions Court 13 cases were committed, and 50 per cent of the persons involved were convicted. In the Magistrates' Courts 4,075 cases were disposed of, the average duration of trial being 14·6 days ; 46 cases lasted each over three months. Extended use was made of the preventive sections of the Criminal Procedure Code, but for all that cognizable cases and offences under other laws increased. In the Sessions Court there were 12 appeals from First-class Magistrates ; 5 were confirmed and the remainder modified or reversed ; 39 revision petitions were disposed of. The Chief Magistrate heard 75 appeals. Considering the percentage of convictions to cases the large decrease in the number of persons dealt with under section 250, Criminal Procedure Code, was unsatisfactory ; the actual working of the courts was sufficiently prompt.

Civil Justice.

59. Compared with last year there were no great variations in the figures under litigation. On the original side 9,973 suits were filed ; 8,743 suits were disposed of and the arrears mounted up considerably. The Chief Court tried 2,391 cases and brought its percentage of disposal up to 80·22 in spite of the fact that the average duration of contested cases rose by 25 days to 207 days. Of the suits concluded 157 had lasted over one year, and 294 over six months. In Small Cause suits, cases took less time and the average was 82 days, the percentage of disposal being nearly 90. Similarly, the arrears of the Registrar and Rural Small Cause Judges were kept within reasonable limits. The period taken for the disposal of regular appeals increased considerably and reached 245 days.

Prisons.

60. 279 prisoners, consisting of 107 convicts, 83 under trials, 88 civil prisoners and 1 lunatic, were admitted into the Central Jail and 276 were discharged. The accommodation for the prisoners was ample and their health was good, the daily average of sick being less than three ; 120 convicts were vaccinated. One convict managed to escape, successfully. The Jail industries continued to be a paying business and a net profit of Rs. 1,893, exclusive of Rs. 398 from the sale of garden produce, was made on

an outlay of Rs. 7,690. This materially reduced the cost of maintaining the prisoners which was Rs. 7,648.

Police.

61. The superior staff consisted of a Deputy Superintendent, 3 Inspectors, 9 Sub-Inspectors and 27 head constables under the superintendence of the District Superintendent of Police, Trichinopoly. The criminal cases of all kinds fell from 2,232 to 2,136 and the percentage of detection was as high as 87. Unfortunately convictions were hard to obtain : thus of the 8 murder cases only one ended in conviction ; of the 11 dacoity cases 2 were discharged, the remainder were undetected ; and only 3 out of 17 robberies were brought home to the perpetrators. The conduct of the force was fairly satisfactory though there were a few cases of grave misconduct. Though the pay of the constables was increased in fasli 1323, recruits were still enlisted with difficulty and the force was short of its full strength by 36.

Education.

62. Elementary education is free throughout the State except in the capital. The institutions under direct State management consisted of a second-grade college, 2 lower secondary schools, 3 special and 170 primary schools. 140 schools under private management received grants-in-aid and in addition there were 91 unaided schools. There were 20 girls' schools, 9 being reserved for Muhammadans. The number of pupils attending secondary schools remained stationary, but there was a considerable increase in the ordinary school-going population (from 12,572 to 13,546) and a perceptible improvement in the attendance at girls' schools. The percentage of boys and girls who went to school to the children of school-going age was 45·94 and 5·26. Nine pucca schools and 9 school-houses were newly constructed. The pay and prospects of schoolmasters were improved in order to attract better men and there were 17 teachers' associations with a membership of 362. The expenditure exclusive of the college was Rs. 68,574 against Rs. 62,499 in the last fasli. 677 pupils attended the college and in the final examinations 43 out of 72 pupils qualified for the college course ; the school marks were above the Presidency average.

Vital statistics and Medical services.

63. Except in Pudukkōttai town no accurate vital statistics are available. The State suffered severely from epidemics and returned 568 deaths from cholera and 619 (against 188 last year) from small-pox. The death-rate in the town this year reached 37 per mille, but the birth-rate was only 28. The births and deaths were 772 and 1,049 against 832 and 933 last year. The medical institutions consisted of a hospital, a women and children's dispensary and nine rural dispensaries. The work of these institutions reckoned by the number of patients was stationary, which may or may not be connected with the fact that the expenditure declined from Rs. 51,840 to Rs. 36,606. No English medicines could be obtained from England and only limited quantities were purchased as required from firms in India.

Vaccination and small-pox.

64. There was a serious epidemic of small-pox, but the Vaccination Department hardly coped with the situation. The actual vaccinations rose from 9,821 to 11,187 but the percentage of success dropped to 92·4 and there were only 380 re-vaccinations : though vaccination was compulsory there were no complete registers of unprotected children, which should form the starting point for thorough vaccination work. In spite of the deplorable state of public health in the town the average attendance at the municipal meetings was only a third of the councillors.

Water-supply and conservancy.

65. The installation of the Jewell Filter was completed early in the fasli and the town was fairly well supplied with good filtered water. The pipe system was extended further at a cost of Rs. 1,600 and a lakh was granted for drainage works ; the several conserved tanks were maintained in fair condition. The municipal income from taxation was Rs. 13,699 or about 8 annas per head ; the total receipts including the State grants and the opening balance were Rs. 64,916 and the expenditure was Rs. 54,269. The five unions managed to spend 66 per cent of their income this year against 43 per cent in the previous year and so should

have increased their sphere of usefulness. A special grant of Rs. 10,000 was made to improve the conservancy arrangements in those villages which had suffered most from the prevailing epidemics, but the grant was not used in the fasli; in a few of the other villages small staffs were engaged for scavenging and lighting purposes.

BANGANAPALLE STATE.

[*Administration Report of the Banganapalle State for the official year 1915–16.*]

[Nawab Saiyid Ghulam 'Ali Khan Bahadur, a Muhammadan of the Shiah sect, is the Ruler of the State. He is 42 years old and has male heirs. He pays no tribute and maintains no military force. The population of the State is 39,356 (1911 census). The Collector of Kurnool is Political Agent.]

General and Political.

66. The State continued to be administered personally by the Nawab, assisted by the Diwan. During the year, His Excellency the Governor of Madras visited the State and remained at Banganapalle for two days. The title of Khan Bahadur was conferred on the Diwan in the New Year's Honours List. The year was fairly prosperous; rain was timely but excessive in some parts, and the heavy rains of October and November damaged cholam and cotton crops to some extent; but all other crops, especially groundnuts, were bumper. After a period of about 15 years the indigo industry was revived and more than a dozen vats were at work throughout the State. The prices of staple food-grains were stationary and this, combined with the facility in getting labour, rendered the condition of the poor and the labouring classes happy. The collections came in without the use of coercive processes and most of the small balance remaining to be collected was due from the Payakarai ryots who resided in the surrounding British villages and held the State lands on patta.

Financial.

67. The total income for the year was Rs. 2,82,478; this showed an increase of Rs. 15,000 over the revenue of the previous year. There was a large increase under the head of Land Revenue, due to a favourable season and prompt collections. An increase in the revenue from Abkāri and Forest was balanced by decreased receipts under Stamps. The total expenditure was Rs. 2,74,056, an increase of Rs. 30,000 over the expenditure in 1913–14. A contribution of Rs. 350 monthly was made by the Nawab towards the maintenance of the Hospital ship *Madras*. The balance at the close of the year was Rs. 22,610 and the arrears due to the State were Rs. 14,810.

Education.

68. The highest education imparted in the State is up to the lower secondary standard. There were 28 State schools opened in suitable centres including two girls' schools in which 108 girls were under instruction not only in the three R's but also in sewing and elementary music. In all the 28 schools, 1,248 boys and 235 girls were given free instruction. The State aided 7 Mission elementary schools opened by the London Mission Society for the Panchamas, and the number of students in them was 47 boys and 12 girls in all. There were also four private schools aided by the State instructing 50 boys and 42 girls.

Public security and crime.

69. The work of the Police force, both preventive and detective, was satisfactory; the percentage of recoveries of stolen property was 17·18 against 5·61 in the previous year. Two rewards were given for honest detective work.

Public health and sanitation.

70. Much useful work was done in the hospital. 16,954 out-door and 163 in-door patients were treated against 15,476 out-door and 131 in-door patients in the previous year. Attention was paid to sanitation both in the town and villages, and four step-wells were converted into draw-wells. There was an increase of 120 in the successful cases of vaccination over last year. No epidemic diseases prevailed in the State and the death-rate per 1,000 of population decreased from 25·24 to 17·28.

Industries.

71. The weaving factory was extended this year and the floor of the factory was paved with stone slabs. The carpets of this factory were becoming popular, and improved plant was introduced during the year. Taking the actual sum of money spent in the working of the factory, the expenditure was Rs. 7,588 and the sales amounted to Rs. 1,732, but Rs. 6,316 worth of goods remained in hand, making a profit of Rs. 460 on the year's working for the first time. Trade generally continued to be flourishing. The price of cotton fluctuated ; ground-nut, indigo and skins fetched good prices. The silk-growing operations were still tentative and could not be called a business concern. Owing to climatic difficulties the attempted cultivation of lac was abortive.

SANDUR STATE.

[*Administration Report of the Sandur State for the official year 1915–16.*]

[The Raja of Sandur, Raja Srimant Venkatrao Rao Sahib, Hindu Rao Ghorapade Mamlukatmadar, Senapati, is a Mahratta. He is 24 years of age. He pays no tribute and maintains no military force. The population of the State is 13,517 (1911 census). The revenue for 1915–16 was Rs. 71,314. The Collector of Bellary as ex-officio Political Agent exercises a general supervision over the Administration of the State and is also Sessions Judge for sessions cases and appeals.]

General and Political.

72. M.R.Ry. A. Subbaraya Mudaliyar Avargal continued to hold the office of Diwan.

Revenue and Finance.

73. No income was derived from mines during the year owing to their closure on account of the war. The revenue fell in 1915–16 from Rs. 1,00,909 to Rs. 71,315. This was due to uncollected dead-rents and royalties owing from the mining company, and to decreased receipts from duty on arrack and State forests. The expenditure also fell from Rs. 74,997.to Rs. 63,898. Receipts from Land Revenue rose from Rs. 19,823 to Rs. 19,922.

Protection.

Police.

74. Of the 39 cases reported by the Police, 16 ended in conviction and 9 in the acquittal of the accused. Thirteen cases were reported as undetected and in the remaining one case the accused was absconding. The offences reported were all ordinary cases of theft, etc. The Diwan, as First-Class Magistrate of Sandur, disposed of 133 out of 139 criminal

Courts.

cases, and as District Munsif disposed of 65 out of 70 civil suits filed before him. There were no appeals filed in criminal or civil cases. One civil suit was filed in the Raja's Court and it has since been disposed of. There were no cases of any sort before the Political Agent. There is only one jail in the State and the cost of its maintenance was Rs. 122. The receipts from the labour of prisoners amounted to Rs. 87.

Production and Distribution.

75. The rainfall was seasonable except in November, when owing to excess of rains some damage was done ; the fall was 38·51 inches, the average of the previous 5 years being 31·19 inches. The average yield of cholam, the principal staple grain, was 12 annas, and it was particularly cheap throughout the year. The price of cumbu was moderate till November 1915 ; then owing to failure of the crop in the Bombay Presidency a large amount was exported and the price rose enormously. The condition of the labouring classes was good throughout. Grass and

Forests.

dead wood in about 2,500 acres of forest were destroyed by fire during the year. The cost of the forest staff including the game preservation staff was Rs. 1,368 and the total receipts from forests were Rs. 14,228. The Agricultural Bank of Sandur was doing good business, and the shareholders received a dividend of 9½ per cent as against 9 per cent in the previous year.

Vital statistics.

76. 11,366 patients received relief at the Sandur State dispensary as compared with 9,958 in the previous year, and the midwife attached to the dispensary attended to 152 labour cases. The cost of maintaining the

dispensary rose proportionally from Rs. 1,697 to Rs. 1,980. But for a few cases of small-pox the public health was generally good. There were 403 births and 244 deaths in the year as against 375 births and 340 deaths in the previous year. The rates of births and deaths per 1,000 of population were 29 and 18 respectively. 337 cases were vaccinated by the State vaccinator.

77. There were nine schools in the State maintained entirely or in part from the State revenues as against twelve in the previous year. One Elementary School at Appayyanahalli was closed and State aid was withdrawn from two pial schools during the year. The number of pupils at school on the 31st March was 351 against 374 in the previous year, but the expenditure on education rose from Rs. 2,127 to Rs. 2,195. **Education.**

CONDITION OF THE PEOPLE.

[FASLI 1325—1ST JULY 1915 TO 30TH JUNE 1916.]

[*Season and Crop Report for the agricultural year 1915-16.*]

78. Although during the monsoons there was excessive rain in some districts, the season was generally favourable, and there was a large increase in the area planted with the staple food-grains, paddy, cholam, cumbu and ragi. With the exception of paddy, food-grains being chiefly cultivated for local consumption were unaffected by the fluctuations of the markets. Harvest prices did not reach the scarcity rates in any district, though the price of rice both in the Northern Circars and around Trichinopoly and Tanjore was at or above warning rates ; elsewhere food-grains were slightly above the level of the previous year's prices. Other crops, however, such as groundnut, cotton, indigo and tobacco, which were grown chiefly for trading purposes, reflected in the areas of cultivation the altered conditions created by the war. In the previous year there had been a large fall in prices and marked scarcity of money, both of which hardships fell heavily on the cultivator ; this year it was satisfactory to find a great recovery in every direction. The prices of cotton, groundnut and sugar rose, but in the case of sugar alone was there an increase of cultivation, the ryots realizing that, as sugar was so dear, every acre of cane would bring good profit ; the growers of cotton and groundnut, however, were naturally nervous, since their products were for export trade and the scarcity of tonnage was well known. In Kurnool and Bellary some ryots grew tobacco as substitute. The price of groundnut was rising at the end of the year, but was still far short of pre-war figures. There was also a great revival in the cultivation of indigo. The scarcity of dyes was apparent from the beginning of the war and the Department of Agriculture gave wide publicity to the excellent opportunity that offered for those who would grow indigo ; cultivation was only hindered by the scarcity of seeds and exports rose at a bound from 1,530 cwt. to 29,447 cwt. in 1915-16. Thus looking at the condition of the agricultural population as a whole, they were better off this year than last. It is true that money was by no means to be had for the asking, as was shown by a continued fall in the price of cattle, but the good prices obtained for their economic products enabled the ryots to get on better without the need for borrowing. The expansion of garden cultivation continued and numbers of new co-operative societies were formed, showing that money was available for investment. It was only where the agriculturist had to deal with conditions that he did not understand that he was unenterprising. It could not be said that the cultivators refused to listen to those who advised new or improved methods of cultivation; for wherever the Department of Agriculture has demonstrated the advantage of a particular method of cultivation, yearly an increasing number of ryots have adopted it. The departmental sale of pure seeds for sowing and of manure seeds for green manure is developing yearly and chemical manures are being applied by

many. If the agricultural machinery that is now being manufactured in the Presidency proves as good as the imported article, development along improved lines is sure to be rapid. The agricultural population, being so large a fraction of the whole, absorbed without difficulty the labour rendered idle by the closing of some mines and factories after the outbreak of war. From the point of view of the public health, the decline in the birth-rate was counterbalanced by a greater decline in the death-rate. There were no serious epidemics of cholera, and the deaths from cholera and dysentery decreased. Child mortality was slightly less and small-pox also claimed fewer victims. The labours of the Veterinary Department, which were specially directed to certain centres of cattle disease, resulted in an improvement in the health of cattle and there were 1,000 fewer deaths. The advance of education, so far as it could be measured in numbers of pupils or numbers of schools, maintained its steady progress ; but the number of those in the higher forms increased to an even more marked degree, which showed that the standard of education was advancing *pari passu* with its wider dissemination. In the districts there was also an advance in the matter of improved sanitation. Although the condition of the average village generally remains unaltered until an attack of cholera entails a visitation from a special inspector, a larger number of big villages were transformed into unions and so devoted a certain amount of organized effort to the creation of healthier surroundings, and it was only the imperative need of economy in the public expenditure that prevented the execution of many large schemes of sanitation.

POLITICAL PENSIONS. (1915.)

79. The Political pensions in force on the 1st January 1915 amounted to Rs. 3,02,109–6–0 per annum and were distributed among 509 pensioners. During the year pensions amounting to Rs. 5,816–8–0 were either newly sanctioned or were transferred from other Provinces, and pensions amounting to Rs. 4,627–13–0 either lapsed or were transferred to other Provinces. Twenty-three pensioners died during the year and four pensions were transferred to other Provinces. Three pensions lapsed during the year, one upon the pensioner's attaining his eighteenth year, another having been capitalized and paid off on the pensioner's marriage, and the third having been capitalized and paid off on the pensioner's attaining his eighteenth year. The pensions in force on 1st January 1916 amounted to Rs. 3,03,298–1–0 and were distributed among 491 pensioners. The payments made to the Carnatic stipendiaries and the Tanjore family aggregated Rs. 2,01,861–1–5 and Rs. 42,599–12–1 respectively.

CHAPTER II.

ADMINISTRATION OF THE LAND.

REALIZATION OF LAND REVENUE.

(FASLI 1324—1ST JULY 1914 TO 30TH JUNE 1915.)

[*Report on the Settlement of Land Revenue for fasli 1324.*]

Sources of Land revenue.

80. The land revenue of the Presidency is derived from the following sources : (*a*) Peshkash or revenue from permanently-settled estates ; (*b*) Shrotriyam jodi or quit-rent levied on inam villages ; (*c*) Assessment including water-rate on lands held under the ryotwari system ; (*d*) Miscellaneous revenue ; and (*e*) Proprietary estates' village service.

Peshkash.

81. The total amount of peshkash payable during the fasli was Rs. 49,87,350 as against Rs. 49,90,138 in the preceding year. The decrease was almost entirely due to the fact that Rs. 2,530, being kattubadi on some villages in the Parlākimedi estate, was paid direct to Government. This again made an increase in the amount of shrotriyam jodi.

Shrotriyam jodi.

82. The quit-rent payable to Government on villages held on shrotriyam or favourable tenure was Rs. 7,56,323, Rs. 5,209 more than in the previous fasli. The chief item in the increase was Rs. 3,261, which accrued since certain minor inams in Tinnevelly were treated as whole inam.

Ryotwari and Miscellaneous.

83. The total extent of ryotwari holdings during the year was 25·55 million acres and exceeded that of the previous year by 216,000 acres. The increase was contributed by all the districts, notably Ganjām, Anantapur, Bellary and Kurnool. The total assessment on holdings was Rs. 515·35 lakhs against Rs. 512·64 lakhs in the previous year. North Arcot contributed an increase of Rs. 65,276 and Chittoor Rs. 52,249, due to the introduction of the resettlement rates in three taluks. Compared with the previous year the area cropped in ryotwari holdings showed a net increase of 351,756 acres owing to the generally favourable character of the season. For the same reason the area under "waste charged" and "waste remitted" showed a decrease of 129,554 and 6,377 acres, respectively. Increase of cultivation was marked in the districts of Anantapur, Bellary, North Arcot and Coimbatore. The total area cropped amounted to 21·93 million acres against 21·46 million acres in the previous year. The revenue from water-rate and second crop charges increased by Rs. 1·17 lakhs to Rs. 32·72 lakhs ; the additions were Rs. 39,000 under "water-rate on dry lands" and Rs. 78,000 under "second crop charge." There was a considerable decrease in Anantapur due to comparatively poor supplies in the irrigation sources, and in Tanjore due to late river freshes and heavy rainfall in the north-east monsoon in the eastern parts of the district which prevented second crop cultivation on wet lands.

Remissions.

84. Various items are included under the head of remissions, and though as a result of a prosperous year, "Waste remitted," "Shavi," and "Other remissions" decreased, "Injury by flood" and "Tirvakammi remission" increased. Rs. 3·97 lakhs were remitted for waste, this being Rs. 40,000 less than in the previous year. The vagaries of the season produced a marked decrease in districts as far apart as Rāmnād and North Arcot. Failure in the irrigation sources made an increase in Anantapur. Rs. 1·59 lakhs against

Rs. 1·95 lakhs in the previous fasli were remitted for short crop or shavi; only Rs. 815 of this related to dry lands. The decrease was most marked in Gōdāvari and Kistna in the north and Madura and Rāmnād in the south. Fixed remissions amounted to Rs. 1·32 lakhs against Rs. 1·63 lakhs in the previous year, but this was mainly due to the lapse of increment remissions given on the introduction of resettlement rates in South Canara and Malabar. Turning to those items which showed an increase, there was a large increase in the amount remitted for injury by floods; in Kistna alone the submersion of lands by the Kollair floods increased the total by Rs. 45,000, and the result was that Rs. 63,000 were remitted against Rs. 38,947 in the previous year. Guntūr on the one hand suffered from floods in the delta taluks and Anantapur from no rain at all, and these two misfortunes made for large figures under Tirvakammi remission, i.e., where dry crops have been cultivated on registered wet land; Rs. 4·50 lakhs were remitted, an increase of Rs. ·95 lakh. There was lastly a small increase in the amount of beriz deductions which totalled Rs. 8·91 lakhs. The net result of all the remissions was an increase of Rs. 9,480.

Miscellaneous revenue.

85. The revenue under this head amounted to Rs. 92·15 lakhs, a net decrease of Rs. 17,500 on the previous year. Guntūr showed the largest decrease (Rs. 60,744), and South Canara the largest increase (Rs. 64,716). The decrease in Guntūr was partly due to the decrease in the enhanced charge levied on poramboke cultivation. The increase in South Canara was mainly due to the sale of a larger number of valuable river accretions and house-sites during the year. The revenue under poramboke occupation increased by Rs. 45,201 to Rs. 5·62 lakhs and the area occupied by 24,252 acres to 121,956 acres; the reclassification as assessed waste of unobjectionable poramboke lands does not appear to have been carried out in most districts. The net ryotwar demand excluding remissions but including water-rate, second crop charge and miscellaneous revenue amounted to Rs. 619·05 lakhs against Rs. 615·43 lakhs in fasli 1323.

Cesses.

86. The current demand under cesses was Rs. 68·92 lakhs against Rs. 68·49 lakhs in fasli 1323. Owing to the adoption of revised grain commutation rates in the Jeypore and Bobbili estates there was a large decrease under the cess levied on permanently settled estates.

Collections.

87. The current demand under land revenue and cesses was Rupees 7,51,79,114; Rs. 7,42,17,587 or 98·7 per cent was collected within the fasli and a sum of Rs. 1,359 was written off the accounts. The total arrear demand under all heads was Rs. 9,53,685; Rs. 8,48,673 or 89 per cent was collected within the fasli and Rs. 15,545 or 1·6 per cent was written off the accounts. The balance outstanding at the end of the fasli, including both arrears and current, was Rs. 10,49,635, and up to the end of October 1915, Rs. 8,73,263 of this had been collected.

Coercive processes.

88. 1,513,159 processes were issued during the year for the realization of Government revenue, showing an increase as compared with the three preceding faslis under all heads. Hitherto a progressive decrease since fasli 1318 had been maintained. In districts round Madras the increase was due to the stringency of the money market and the fall in the price of groundnut, and in Malabar to the sudden heavy fall in the price of coconut, copra, etc., after the outbreak of the war. In the Deccan districts the season was unfavourable. The number of attachment processes was 109,712 against 87,461 in fasli 1323. There was a slight decrease in the percentage borne by the number of distraints and attachments to that of demand notices. The number of defaulters whose immovable property was attached was 18,339 against 14,880 in fasli 1323. There was a remarkable disproportion noticed in the Madura district between the number of defaulters whose property was distrained and the number of those whose real property was attached, due to the large number of absentee pattadars in the Periyar area. Fewer defaulters whose property was attached were able to pay the arrears before the sale notice was issued, and the number of defaulters whose property was sold was greater than in fasli 1323. The percentage of actual sales to sale notices was 2·92 and that of defaulters whose property was actually sold to the total number of pattas was ·05.

Immovable property of the estimated value of Rs. 1,40,604 was sold for the recovery of arrears amounting to Rs. 25,217 and realized Rs. 78,478. The area of lands bought in by Government for want of bidders was 2,136 acres of dry and 290 acres of wet ; more than one-half of the area bought was in the Deccan districts and Madura.

Loans and Advances.

89. The advances made under the Land Improvement Loans Act during fasli 1324 amounted to Rs. 3·37 lakhs and those under the Agriculturists' Loans Act to Rs. 4·81 lakhs. The aggregate advanced under both Acts was thus Rs. 8·18 lakhs as against Rs. 7·58 lakhs in the previous year. The increase was due partly to the grant of a loan of Rs. 10,000 to the Salvation Army for the reclamation of waste lands, and partly to the grant of large advances for the purchase of seedlings, fodder and cattle to the ryots in the portions of the Repalle taluk affected by floods. In Rāmnād a special officer worked in the district to encourage applications for loans during the first five months of the fasli. With a view to increase the popularity of State loans, the rules relating to them were relaxed in some important respects towards the close of the fasli. Of the sums of Rs. 3·35 lakhs and Rs. 3·66 lakhs repayable during the year under the Land Improvement and the Agriculturists' Loans Acts, respectively, on account of principal, Rs. 2·91 lakhs or 86·9 per cent under the former Act and Rs. 3·05 lakhs or 83·2 per cent under the latter Act were collected ; sums amounting to Rs. 246 under the former Act and Rs. 790 under the latter were written off the accounts as irrecoverable. The aggregate amount of principal and interest repayable during the year under both the Acts was Rs. 9,93,207, of which about 26 per cent was collected without resort to coercive processes and 56 per cent after the issue of demands. The balance outstanding at the end of the year was Rs. 1,41,043, the arrears being heaviest in Madura, Anantapur, Bellary, Chingleput and Tanjore. With the aid of loans under the Land Improvement Loans Act 435 wells were constructed during the fasli and 349 wells were repaired. Rs. 52,157 were spent on the reclamation of 4,029 acres of land and Rs. 20,200 on the purchase and installation of oil-engines and pumps. Under the Agriculturists' Loans Act 7,167 head of cattle were purchased and 119 houses were rebuilt. Seed-grain was purchased to the amount of Rs. 2,382 and Rs. 500 were expended on sugarcane mills.

Transfer of registration.

90. During the fasli new rules were introduced relating to transfers of registry. The result was an increase of 71·77 per cent in the applications for transfer received through officers of the Registration Department and 29·55 per cent in the applications made direct to Revenue officers. The number of cases which Revenue officers dealt with on their own initiative rose from 17,969 to 19,794 ; the largest increase was in Tinnevelly.

Expenditure.

91. The charges of district administration including salaries, etc., of Revenue Inspectors but excluding those of village establishments were Rs. 50,74,971, or 6·8 per cent of the land revenue and cesses realized, against 8·2 per cent in the preceding fasli. The village service charges including proprietary estates were Rs. 51,78,435. Including this sum which is met from Provincial funds, the total charges were Rs. 1,02,53,406 and represented 13·7 per cent of the collections of land revenue and cesses.

SURVEYS. (1915–16.)

[*G.O. No. 2266, Revenue, dated 2nd October 1916.*]

Surveys.

92. All the six parties which were at work in the previous year continued their operations : No. I Party in Ganjām, Vizagapatam and Kistna, No. II in Chittoor and Nellore, Nos. III and IV in Madura, No. V in South Arcot and No. VI in Tanjore. Both Nos. I and II Parties were employed exclusively on estate surveys. The town survey sections attached to Nos. I and IV Parties towards the close of the preceding year continued

their operations, the former in the districts of Ganjām, Vizagapatam and Gōdāvari and the latter in Tinnevelly, Madura and Tanjore. The headquarters of Nos. II and VI Parties were transferred to Nellore and Tanjore, respectively. The gross expenditure was Rs. 10,78,738, made up of Rs. 7,46,500 chargeable to Government and Rs. 3,32,238 chargeable to proprietary estates, municipalities, etc.

Parties.

93. No. I Party worked in Ganjām, Vizagapatam and Kistna. In Ganjām the survey of the Kallikōta-Atagada estate under the simplified system sanctioned therefor was continued and 134 square miles were credited. The survey of Dharakota estate was also taken up and practically completed on the same lines, the area credited being 113 square miles ; only the boundary between Dharakota and Bodogoda remained to be settled. This must wait till the two zamindars have come to an agreement about its alignment. In Vizagapatam the block survey of the whole inam villages in 14 taluks of the district, which had been in progress since 1912, was completed, the area credited in the year being 167 square miles. The total number of villages as finally surveyed and their area were 709 villages and 664 square miles respectively. Only 40 square miles of the Mīrzāpuram estate in Kistna could be completed. In Chittoor No. II Party completed the survey of the Punganuru zamindari. Scattered Government lands in 16 palaiyam villages aggregating 1 square mile were also surveyed at the instance of the Special Settlement Officer. In Nellore the survey of the unsurveyed block in the Nellore municipality was commenced but had to be stopped almost immediately by reason of floods caused by abnormal rains, and wet crops. 347 square miles were surveyed in Venkatagiri. In Cuddapah the survey of the Sivalapalle jaghir and of the irrigable zones in certain shrotriyam villages of the district was taken up and ompleted. The operations of No. III Party were confined to the Madura district, where the revision survey of 112 square miles of Nilakkōttai and of the remaining 12 square miles in Periyakulam, and the resurvey of 97 square miles in Nilakkōttai and 38 square miles in Madura were carried out. Two unions, Nilakkōttai and Batlagundu, in the Nilakkōttai taluk were finished and four others in the Periyakulam taluk were in progress. The revision survey of the remaining 413 square miles in Dindigul was completed by No. IV Party, karnams contributing 32 square miles. Resurvey was then taken up in the Mēlūr taluk, and 24 square miles were completed. The Rettayambādi mitta was finished, 28 square miles having been surveyed during the year. In two unions in Madura and in two unions in Rāmnād, street surveys were completed and in seven more work was in progress ; some work was also done in Tinnevelly and Trichinopoly. The field of operations of No. V Party lay exclusively in the South Arcot district. The revision survey of 66 square miles in Cuddalore and the resurvey of 327 square miles in Villupuram were carried out. A joint verification by a British and a French representative of the boundaries of 16 villages in the Cuddalore taluk abutting on French territory was also made. Street surveys were in progress in three unions. Resurvey was conducted in 225 square miles in Māyavaram and 34 square miles in Mannārgudi by No. VI Party in the Tanjore district. The demarcation and survey of both the banks of the Cauvery river in the Kulittalai and Musiri taluks was undertaken at the instance of the Public Works Department and 27½ miles were surveyed.

Central Office.

Maps.

94. The area of village maps printed during the year was 3,220 square miles, including 43 square miles of proprietary villages and 171 square miles of Coorg Province, as against 2,212 in the preceding year. The arrears of printing at the end of the year were 3,633 square miles against 4,357 square miles in the previous year.

SETTLEMENTS (1915–16.)

[*G.O. No. 2266, Revenue, dated 2nd October 1916.*]

Parties.

95. All the five Settlement parties which were at work at the end of the previous year, continued their operations : Party No. I in the North Arcot district, Party No. II in the districts of South Arcot, Tanjore, Coimbatore, Trichinopoly and Salem, Party No. III in the districts of Cuddapah, Chittoor and Anantapur, Party No. IV in the districts of Madura, Rāmnād and Tinnevelly and Party No. V in the districts of Ganjām, Vizagapatam, Gōdāvari, Kistna and Nellore. A small settlement staff was also at work in the Nilgiris in connection with the preparation of a scheme report for the resettlement of the Nilgiri upper plateau.

Districts.

Ganjām.

96. The settlement of the Chokapād khandam including the Paik's and Naik's inams comprised therein and of the previously unsettled tracts of the Goomsur taluk was completed. The revision of quit-rents on village service inams in the proprietary estates of the taluks of Chicacole and Aska and the classification of the resumed inam villages of Bejjipatti and Kumarasingi in the Kallikōta estate and of the village service inams in the proprietary estates of the Berhampur taluk were also completed. The preparation of a record-of-rights was commenced in the Humma estate and in the Baruva village of the Baruva Hunda estate. The work was in progress in the latter estate, but in the former it was stopped at the instance of the proprietrix who applied for the postponement of the operations for a year. Proposals for the settlement of the resumed villages of the Antada and Chittampādu Bandivalasa mittas in the Golgonda taluk were received and submitted. The soils and irrigation sources in the three Government taluks of the district were inspected for the ensuing resettlement of these taluks. A block of 2,630 acres of unassessed lands in the three villages of the Coringa island in Gōdāvari was classified and the record-of-rights for the South Vallūru estate in Kistna was finally published. In Nellore rough pattas were issued and objections heard in the resumed inam village of Ramapuram. The classification of soils in Pentapadu, a resumed inam village in the Gudur taluk, and the demarcation and classification of the two whole inam villages of Matakampūdi and Ramachandragunta were completed.

Vizagapatam.

Gōdāvari, Kistna.

Nellore.

North Arcot.

97. In North Arcot new rates were introduced in the remaining villages of the Polur taluk and in all the non-anicut-fed villages of the South Cheyyar and Wandiwash taluks. The inspection of irrigation sources in the 37 villages of the Wandiwash taluk outstanding at the end of the previous year was completed and proposals for the reclassification of the sources under the Cheyyar anicut system were approved. The quit-rents on village service inams in 471 villages comprised in the 38 proprietary estates of the district were also revised.

Cuddapah, Anantapur and Chittoor.

98. In Cuddapah the fair accounts of the villages of Upparapalle and Settigunta into which the old village of Settigunta of the Pullampet taluk was split up, were furnished. The diglott register of Chintarajupalli in the Siddhavattam taluk in Cuddapah and of the three villages of the Kadiri taluk in Anantapur were submitted. The introduction of new rates in the taluks of Chittoor, Chendragiri and Palmanēr was finished. Proposals for the settlement of the resumed inam village of Tirumānipalle were approved and new rates have since been introduced. Revision of quit-rents on village service inams was completed in all the proprietary estates in the district except the Punganūru zamindari where the work was well advanced.

Coimbatore and Trichinopoly.

99. Diglott registers for three villages in the Kollegal taluk and two villages in the Erode taluk of the Coimbatore district, and for four villages in the Karūr taluk of the Trichinopoly district as well as the registers of the extra-municipal portions of five villages and of the extra- and intra-municipal portions of one village included in the Coimbatore municipality were submitted. Certain minor items of supplemental survey

work were done, and the final scrutiny of survey records was completed in every respect in the Trichinopoly taluk and in the whole inam village of Umaiyāpuram in the Musiri taluk. Rough pattas were issued for 100 villages in the Trichinopoly taluk, and the diglott registers of the Pacchaimalai hill villages of the Musiri taluk were submitted. In South Arcot the chief items of work done were the revision of adangals and the collection of materials for the compilation of a scheme report for the resettlement of the district. The former item of work was complete in 232 villages of the Tindivanam taluk and in the remaining 103 villages of the Villupuram taluk. Patta transfer inquiries were finished in 18 villages and field inspection in 116 villages of the Mannārgudi taluk.

South Arcot.

Tanjore.

100. Revision of adangals was completed by the special revenue staff in all the villages of the Nilakkōttai and Madura taluks except those included in the Madura municipality, and the records relating to them were furnished to the Survey Department. The special staff also commenced work in the taluks of Mēlūr and Tirumangalam. Proposals for the resettlement of the non-Periyār tracts of the district having been approved, rough pattas were issued and objections thereto heard in the Palni taluk.

Madura, Rāmnād and Tinnevelly.

Registers.

101. During the year 554 manuscript registers were received, 461 were scrutinized, 1,382 were printed and 864 were issued to Collectors.

Finance.

102. The total expenditure was Rs. 6·03 lakhs, of which Rs. 1·29 lakhs were towards the upkeep of the Controlling office and Rs. ·55 lakh to pay for work done at the Government Press. The remainder was spent on the five settlement parties.

LAND RECORDS. (1915-16.)

[*G.O. No. 2266, Revenue, dated 2nd October 1916.*]

Staff.

103. Mr. G. A. D. Stuart, I.C.S., held the office of Director of Land Records. Two survey schools for Assistant and Deputy Collectors were held for the first time. The Superintendents were mainly engaged in general inspection and supervision of maintenance work. Improvement was effected in the proper maintenance of survey advance accounts, as a result of the inspection by the Land Records Superintendents of these registers in the Taluk offices. Land Records staffs were employed in all the districts of the Presidency. In the delta taluks of Gōdāvari which were ordered to be resurveyed, the Land Records Inspectors were engaged in current maintenance work and the measurement and mapping of sub-divisions. In Salem, the Inspectors of the southern taluks were working in the northern taluks. The Land Records Inspectors of Hōsūr taluk were employed solely on the verification of the arrears of sub-division sketches. In Madura the Land Records Tahsildar was engaged in supervising the measurement of sub-divisions marked by the special staff for the revision of adangals in the municipal towns of Palni, Periyakulam and Dindigul and in reconciling the survey advance accounts of all the taluks in the district. In the remaining districts the staff was mainly employed on regular maintenance.

Operations preliminary to maintenance.

104. During the year the system of preparing demarcation sketches and stone registers with the help of the manuscript field measurement books worked satisfactorily, and maintenance was taken up immediately after settlement. The preparation of demarcation sketches and stone registers was completed in the taluks of Aska (Ganjām), Sarvasiddhi (Vizagapatam), Kadiri (Anantapur), in Madanapalle and Vayalpad taluks of the Chittoor district, and in the newly-settled taluks of North Arcot—Arkōnam, Wallajah, Vellore, Gudiyāttam and Cheyyar North—while the work was in progress in the taluks of Goomsur (Ganjām), Kaikalūr (Kistna), Polur (North Arcot) and in Kollegal (Coimbatore district). In

the three taluks of Kadiri, Madanapalle and Vayalpad as well as in Chendragiri, Chittoor and Palmanēr (which were resettled during the year), stone depots were opened and the work was reported complete. In Bellary and Anantapur districts demarcation sketches were prepared afresh for villages whose key maps had become unserviceable. In seven villages of Sankaranāyinārkōyil A registers were not prepared owing to the non-receipt of village maps. For 30 villages of Kōllegal and one of Gobichettipalaiyam of the Coimbatore district, the work could not be completed as the field measurement books and maps were not received. Demarcation sketches and stone registers were prepared for 18 out of the 22 villages of the Kaikalur taluk (Kistna) which were recently resurveyed. No stone depots were opened in the Gōdāvari district. In the Chittoor taluk stone depots had yet to be opened in nine villages. All remeasurement work was complete in the districts of Gōdāvari, Kistna, Guntūr and Bellary, and the delta taluks of the first three districts were reserved for resurvey. Cochin town was resurveyed by a special staff. The work was inspected by the Director of Land Records while in progress and by the Land Records Superintendent both, while in progress and after completion.

Training of staff.

105. Survey schools for the training of revenue subordinates in chain survey were held in 17 districts. Schools for the training of karnams were also held in 20 districts. A large number of amins and process-servers were also trained along with the karnams during the year. A very small number of candidates who were found to be hopelessly bad or incompetent were removed from service. No karnams were trained in the districts of North Arcot, Madura and the Nilgiris.

Current maintenance.

106. The work of maintaining survey marks was carried on in the districts of Ganjām, Vizagapatam, Gōdāvari, Kistna, Guntūr (except the taluks of Tenali, Rēpalle and Bāpatla), Nellore, Kurnool, Bellary, Anantapur, Cuddapah, Chittoor, North Arcot (except the taluks of Wandiwash and Cheyyar South), Chingleput, Tanjore (except the taluks of Māyavaram and Mannārgudi), Rāmnād, Tinnevelly, Coimbatore, the Nilgiris, Malabar, Anjengo, South Canara, the three northern taluks of Salem, the Shevaroys and in the Karūr taluk of the Trichinopoly district. In Anantapur there was a great reduction in arrears of stone maintenance, from 151,343 to 54,213, as a result of the verification of figures in some taluks, and similar action in the other taluks will probably reduce the total arrears very largely. Experience of stone maintenance in the districts of Vizagapatam, Nellore, Kurnool, the upland taluks of Gōdāvari and Kistna, and South Canara showed that the existing Land Records staffs in the districts can maintain all stones in their charge. Arrears in these districts were small, and continued to be so, and the figures were fairly correct. The work of stone maintenance in Tinnevelly, South Canara and Nellore was satisfactory. The system of whitewashing stones, which was in vogue in Nellore, Salem and parts of the North Arcot district, contributed to keeping the percentage of missing stones low. In the Tanjore district the Land Records staff renewed and repaired 6,834 survey marks more than the number attended to in the preceding year. 19,600 stones were done by the Land Records staff, and 12,918 replaced by the ryots were checked. The progress made in the check-measurement and mapping of sub-divisions was good in Vizagapatam, Gōdāvari, Kistna, Nellore, Kurnool, South Canara and Tinnevelly. In Coimbatore the arrears were rather heavy in three taluks, due partly to the non-receipt of field measurement books ; in Trichinopoly printed field measurement books for Karūr taluk had not yet been received and sub-divisions could not be mapped ; similarly in Sāttūr and Srīvilliputtūr taluks of the Rāmnād district printed field measurement books were received for four villages only. No progress was made in mapping. In the Nilgiris topographical registers were prepared for 39 villages of the plateau, and in Coimbatore the registers were complete. 166 village maps were sent to the Director of Survey for reprinting. Special attention was paid to the maintenance of patta registration.

WASTE LANDS.

(FASLI 1325—1ST JULY 1915 TO 30TH JUNE 1916.)

[*Season and Crop Report for the agricultural year 1915-16.*]

107. The total area of the Presidency is 89,552,313 acres, of which 34½ million acres were under cultivation, 13 millions were classed as Forest, and 22½ million acres were not available for cultivation. Of the remainder 8½ million acres were fallow in the year and 11 million acres were cultivable waste not taken up by any. In the last two years the area uncultivated and the area under Forests have increased considerably at the expense of the area not available for cultivation.

GOVERNMENT ESTATES.

108. There is nothing to record under this head in the Madras Presidency.

WARDS' ESTATES.

(FASLI 1324—1ST JULY 1914 TO 30TH JUNE 1915.)

[*Report on the Administration of the Estates under the Court of Wards in the Madras Presidency for fasli 1324 (1914-15).*]

Estates under management.

109. At the beginning of fasli 1324, i.e., on the 1st July 1914, there were nineteen estates under the Court's management. The Vuyyūru estate in the Kistna district was restored to the proprietor on the 29th April 1915, the Court having retained its superintendence for one year after the ward attained his majority with a view to improve the financial condition of the estate which was heavily involved. The Pārvatīpuram estate in the Vizagapatam district was handed over to its proprietor on his coming of age on the 6th June 1915. The Madugula estate in the same district was taken under the Court's superintendence during the year. The number of estates under the Court's management at the end of the fasli was therefore eighteen.

Estates handed over.

110. The Vuyyūru estate was under the Court's management for eight years and eight months. It was heavily indebted when taken over and, to discharge the debts, the Court had to sell some of the estate villages, lands and gardens and to borrow from other estates. Besides, under the deceased zamindar's will, some villages and lands had to be granted and large sums of money paid to the legatees concerned. Debts amounting to Rs. 19,27,606 were discharged during the Court's regimé, leaving an unliquidated balance of Rs. 4,33,478. The Court spent Rs. 81,626 on irrigation works and other improvements. A sum of Rs. 24,000 was handed over to the ward in cash, besides Government promissory notes of the face-value of Rs. 1,43,700. The Pārvatīpuram estate was under the Court's superintendence for fourteen years. The revenue demand of the estate fell from Rs. 23,908 at the time of assumption to Rs. 14,790 on the date of restoration, the decrease being due to the sale of five villages to discharge a part of the debt due by the estate. During the period of the Court's management, Rs. 18,308 were expended on irrigation works and other improvements. The estate was handed over with a surplus of Rs. 3,500 and no outstanding liabilities.

Finance.

Demand, collection and balance.

111. The total current demand was Rs. 19·55 lakhs, of which Rs. 16·12 lakhs were collected and Rs. ·01 lakh written off, leaving a balance of Rs. 3·42 lakhs at the close of the year. In six estates, the balance was less than 5 per cent of the demand ; in three, between 5 and 10 per cent ; the balance exceeded 25 per cent in Pedda Merangi, Urkādu, Kadavūr and Madukkūr. In Pedda Merangi, more than half of the balance was covered by suits and execution applications. The large balance in

Kadavūr was due to want of control over the village officers prior to the Court's assumption and to the slackness of the local officials. The high percentage in Madukkūr was due to the fact that collection work had been very difficult, owing partly to the confused state of the accounts, partly to the longstanding disputes between the ryots and the late zamindar and largely to the failure of the groundnut market. The total arrear demand at the beginning of the fasli was Rs. 8·72 lakhs, of which Rs. 2·94 lakhs were collected and Rs. ·89 lakh written off, leaving a balance of Rs. 4·89 lakhs at the end of the year. There was no outstanding balance in Māmbārai and Timmājiammā's estates ; in four estates, the balance was less than Rs. 1,000 ; in three, between Rs. 1,000 and Rs. 5,000 ; and in five, between Rs. 5,000 and Rs. 15,000. The bulk of the balances in the estates was covered by suits or execution-proceedings, instituted or proposed to be instituted, or by decrees and bonds which had not fallen due. The total cash balance of all the estates at the beginning of the fasli was Rs. 9·56 lakhs ; the aggregate cash receipts were Rs. 26·80 lakhs and the expenditure was Rs. 29·85 lakhs, leaving a cash balance of Rs. 6·51 lakhs. Including Government promissory notes and other securities and the estimated value of grain on hand, the closing balance to the credit of the estates was Rs. 30·37 lakhs.

Surplus balances.

112. There was a surplus balance exceeding a lakh of rupees to the credit of Kallikōta-Atagada, South Vallūru, Mīrzāpuram, Kangundi and Sāptūr estates. Out of the surplus balance in Mīrzāpuram (Rs. 11·27 lakhs), about Rs. 7 lakhs were expected to be spent on the purchase of four villages and Rs. 1½ lakhs on survey and preparation of a record-of-rights. There were proposals for utilizing the remaining amount for the purchase of some more villages and for the execution of maramat works. In South Vallūru it had been arranged to purchase three villages for about 3½ lakhs of rupees; the remaining amount was reserved for improving irrigation works, and for drainage and irrigation projects. A large portion of the balance in Kallikōta-Atagada was required for survey and settlement of rents and for the improvement of irrigation works. The balance in Sāptūr was reserved for the repair of irrigation sources and estate buildings, for the construction of wells to supplement irrigation from tanks and for the marriage of the ward and his sisters.

Agricultural improvements.

113. No home-farm lands were used during the year for trying improved methods of agriculture. With a view to start a small cattle-breeding farm in the Sāptūr estate for the benefit of the estate and its tenants, a bull and two cows of the Kāngayam breed were purchased during the year. The farm will be placed under the management of a Veterinary Assistant.

Establishment charges.

114. The average percentage of the establishment charges and Government commission to the normal receipts, exclusive of extraordinary items of income such as debts recovered, sale-proceeds of property, etc., was 15·1 against 12·3 in the previous year. The percentage exceeded 15 in 9 estates and, except in Sivaganga and Kangundi, was higher than in the previous year. It was not possible to curtail the establishment charges in any of these estates without impairing the efficiency of the administration.

Works.

115. Excluding the Vuyyūru estate and including the Devastanam and Chattram sections of other estates, the total allotment for maramat works was Rs. 4·54 lakhs, of which Rs. 4·05 lakhs, or 89·2 per cent, were spent against 73·7 per cent in the previous year. The value of work done but not paid for within the fasli was Rs. ·18 lakh. Of the total expenditure, Rs. 1·95 lakhs were spent on irrigation works, Rs. 1·21 lakhs on buildings, Rs. ·17 lakh on roads and other works and Rs. ·72 lakh on establishments and contingencies. The outlay on maramat works was 26·9 per cent of the total ordinary charges of the year against 16·2 in the preceding year and 28·09 in fasli 1322.

Debts due to the estates.

116. The debts due to the several estates under management at the beginning of the fasli amounted to Rs. 3·17 lakhs. The aggregate amount due was Rs. 3·47 lakhs, of which Rs. ·73 lakh was collected and Rs. ·14 lakh

written off, leaving a balance of Rs. 2·60 lakhs appertaining to 15 estates. The balance in Kallikōta-Atagada Rs. ·48 lakh) was due partly to the unfavourable season and partly to want of bids at sales and to the stay of execution-proceedings pending disposal of appeals. The greater portion of the balances in Mīrzāpuram (Rs. ·74 lakh) and South Vallūru (Rs. ·77 lakh) was covered by decrees, but there was delay in taking execution-proceedings. The whole of the outstanding balance in Kangundi (Rs. ·31 lakh) has since been ordered to be written off as irrecoverable.

Debts due by the estates.

117. The liabilities of the several estates at the beginning of the fasli amounted to Rs. 12·77 lakhs, exclusive of the two debenture loans aggregating £212,500 repayable in fixed annual instalments from the income of the Kallikōta-Atagada estate, of which £28,300 were discharged up to the end of the year. Debts amounting to Rs. 1·71 lakhs were brought to account during the year. Including interest and costs which accrued during the year (Rs. ·67 lakh, the total liabilities amounted to (Rs. 15·15 lakhs, of which Rs. 2·25 lakhs were repaid and Rs. ·68 lakh struck off, leaving a balance of Rs. 12·22 lakhs payable by 11 estates, or Rs. 7·86 lakhs excluding Vuyyūru which was restored to the proprietor. The debts exceeded Rs. 50,000 in Nandigāma, Chundi, Madukkūr, Kadavūr and Berikai estates.

Education of the wards.

118. The wards of 8 estates were in residence at Newington during the whole or part of the fasli. The usual forms of exercise were kept up. All the minors either rode or practised gymnastics in the mornings and played cricket or tennis in the evenings. The health of the minors, their educational and general progress and their conduct were on the whole satisfactory. Some of the minors—Vuyyūru, South Vallūru, Mīrzāpuram, Kangundi and Sāptūr—offered to subscribe towards the War fund ; and the Court, appreciating their loyal wishes, sanctioned the payment of suitable contributions from the funds of their estates.

Encumbered estates.

119. At the beginning of the fasli, the provisions of section 45 of the Madras Court of Wards Act I of 1902 were in operation in two estates, viz., Chundi and Kadavūr. In Kadavūr, debts amounting to Rs. ·13 lakh and Rs. ·03 lakh were paid off and struck off, respectively, during the year, leaving a balance of Rs. 2·19 lakhs at its close. The proposal to sell the estate's kudivaram right in the pannai lands in order to discharge the debt was kept in abeyance, pending disposal of the question of securing the money required by leasing the mining rights in the estate.

Miscellaneous.

120. The Raja's High School, Sivaganga, maintained at the cost of the Sivaganga estate, continued to work well. The Kangundi estate maintained the Higher Grade Elementary School at Kuppam, and the Kallikōta-Atagada estate a Sanskrit school. The forests in Kallikōta-Atagada, Pedda Merangi, Vuyyūru, South Vallūru, Mīrzāpuram, Chundi, Kangundi, Timmājiammā's estate, Kadavūr and Sāptūr were worked under sections 26 and 32 of the Madras Forest Act ; the Government have subsequently extended the application of these rules to the forests in the Berikai and Madugula estates. The forests in Nandigāma were, as usual, worked under departmental rules. In Nandigāma the final check of the survey records by the special staff appointed for the purpose was completed ; the survey of the Kallikōta-Atagada estate was in progress. In Sāptūr, the money-rent system was brought into force in five villages, the tenants of which had previously objected to its introduction but subsequently withdrew their objection. Except in Kallikōta-Atagada and Madukkūr, the village accounts were maintained in all the estates, though the degree of their efficiency varied considerably. The estates of Madugula and Madukkūr had not recovered from the effects of the mal-administration prior to assumption of superintendence by the Court ; in Madugula, the ryots did not know what amounts were payable by them, no pattas and muchilikas having been exchanged for ten or twelve years. In Madukkūr, the tenants were said to be heavily indebted to the estate and to be recalcitrant owing to the strained relations between them and the late zamindar who tried to exact excessive rents.

REVENUE AND RENT-PAYING CLASSES.

(FASLI 1324—1ST JULY 1914 TO 30TH JUNE 1915.)

[*Report on the Settlement of Land Revenue for fasli 1324.*]

Revenue-paying classes.

121. The chief revenue-paying classes in the Presidency are the zamindars, whole inamdars, minor inamdars, and ryotwari pattadars or ryots. Of these, for purposes of revenue, the first and last classes are the most important. There are fourteen large zamindaris in the Presidency, the largest being Jeypore and Venkatagiri. The total area of all the zamindaris is over 19 million acres and the amount of peshkash paid by them is Rs. 49·87 lakhs out of an estimated revenue of Rs. 233·56 lakhs. The zamindari of Vizianagram pays Rs. 4·93 lakhs, Venkatagiri Rs. 3·68 lakhs, Rāmnād Rs. 2·92 lakhs and Sivaganga Rs. 2·53 lakhs.

Ryotwari.

122. The total extent of ryotwari holdings was 25·55 million acres, of which 20·60 million acres were cropped in the year. The assessment on this was Rs. 515·35 lakhs, and thus formed the bulk of the land revenue. The number of ryotwari villages was 22,283. There was again a net decrease in this number, and it occurred chiefly in Coimbatore where a number of villages were clubbed together for purposes of administration. Eighteen new villages were also created in the year.

Rent-paying classes.

123. Sub-letting in ryotwari villages is chiefly resorted to by those engaged in professions other than agriculture and by large landholders. It is inevitable to a certain extent; for capitalists prefer to invest their money in land as it is attended with far less risk than investing money in trade, and further the possession of land is one of the hall-marks of respectability in Southern India. It was reported to be on the increase in Ganjām and in parts of South Canara, the explanation for the increase in the last-named district being the reclamation of uncultivated warg kumaris. In the Periyār area of Madura it is found that a large number of pattadars are persons pursuing other lucrative professions in Madura town. Sub-letting is the general practice in Tinnevelly and in the delta taluks of Guntūr, but it is on the decrease in Bellary, where the landlords preferred to cultivate their lands themselves on account of the rise in the prices of food-grains. In parts of Kistna a tendency, though not very marked, was noticed among landowners to decrease sub-letting, as they apprehended the initiation of legislation similar to the Estates Land Act conferring occupancy rights on tenants.

CHAPTER III.

PROTECTION.

LEGISLATIVE AUTHORITY.

124. *Vide* pages 128 to 131 of the Report on the Administration of the Madras Presidency during the year 1911–12.

COURSE OF LEGISLATION. (1915–16.)

Legislative Council.

125. Five official additional members of the Legislative Council resigned during the year, three when proceeding on leave out of India, one on the return from leave of the officer in whose place he was appointed, and one on becoming an additional member in the Legislative Council of the Governor-General. A vacancy occurred also among the elected non-official members by the resignation of the representative of the Madras Chamber of Commerce. All the above vacancies were duly filled in the course of the year. The three years' term of office of the additional members expired in the course of December 1915 and January 1916. But as it was considered that the constitution of a new council in the middle of a legislative session would be inconvenient, the term of office of the existing additional members of the Council was extended up to the 31st May 1916 by His Excellency the Governor, in exercise of the powers conferred on him by the amended Regulation X of the Regulations for the nomination and election of Additional Members. Including ten adjourned meetings, there were fourteen meetings of the Council, the average attendance of additional members being 37·1 (14·5 official and 22·6 non-official).

Acts and Bills.

126. The following Acts were passed during the year :—(1) The Madras Port Trust (Amendment) Act, 1915, defining more precisely the responsibilities of the Port Trust Board as a bailee in respect of goods passing through its premises, and empowering it to handle passenger traffic between the ship and shore ; (2) The Madras Outports Landing and Shipping Fees (Amendment) Act, 1915, empowering the Governor in Council to exempt any class or classes of goods from payment of fees under the Outports Landing and Shipping Fees Act of 1885 and to remit the whole or any charge levied under section 4 ; (3) The Madras Irrigation Cess (Amendment) Act, 1916, extending the period of operation of the Irrigation Cess (Amendment) Act of 1913 to the end of the year 1920 ; and (4) The Madras District Municipalities (Amendment) Act, 1916, making further provision for the control by municipal authorities of industrial operations carried on in factories situated in municipal towns. A Bill to amend the Madras Civil Courts Act, 1873, so as to raise the pecuniary limit of jurisdiction of district munsifs from Rs. 2,500 to 3,000, was introduced at the meeting of the Council held on the 1st February 1916 and was pending before the Council at the end of the year. The Malabar Marriage and Inheritance Bill, 1913, and the Malabar Partition and Succession Bill, 1913, intended to regulate the laws of marriage, inheritance, partition and succession among the Marumakkattayam and Aliyasantana Hindus of Malabar and South Canara, were withdrawn by

the non-official member in charge of the Bills and leave was granted to him for the introduction of a revised Bill in their place. Leave was also granted for the introduction of three other private Bills, of which the first was for the amendment of the Madras Medical Registration Act, 1914, the second to amend the Malabar Wills Act, 1898, and the third for amending and defining the law of intestate succession applicable to the Mappillas governed by the Marumakkattayam or the Aliyasantana law of inheritance.

127. No draft Bills were submitted during the year by the Local Government to the Government of India for introduction in the Governor-General's Council. **Government of India.**

POLICE. (1915.)

[*Report on the Administration of the Police of the Madras Presidency for the year 1915; Statistics of British India, Part VI, Administrative and Judicial—Police.*]

128. Mr. P. L. Moore, C.I.E., I.C.S., held charge of the department throughout the year except for two months when Mr. P. B. Thomas acted for him. There was again a reduction in the number of transfers of District Superintendents of Police; in six districts there was a single change, in one district two, and in another three; in the remaining 20 districts there was either no change at all or a change for a few weeks only. The headquarters of the District Superintendent of Police, North Malabar, were removed from Tellicherry to Cannanore on the 1st June 1915. By the sudden death of Mr. C. D. J. Carmichael, C.I.E., just as he was about to proceed to Europe on long leave preparatory to retirement after a service of 32 years, the department lost an officer of sound judgment and a high sense of duty. **Changes in the Police force.**

129. The sanctioned strength of the permanent force on the 31st December 1915 was 32,918 and showed a decrease of 19 on the previous year. The principal changes were the abolition of Chintapalli reserve in Vizagapatam district, and additions to certain districts owing to the creation of new police stations and for working the Hackney Carriage Act. The temporary additional force consisted of: (i) Plague Force (1,047); (ii) Police guards at the various criminal settlements in the Presidency (124); and (iii) temporary forces enlisted for other special purposes, e.g., temporary private guards (167). In spite of the special measures taken to bring the force up to strength, which were mentioned in the last report, recruitment continued to be difficult in many districts and the number of vacancies in the constabulary at the close of the year was larger than at the end of the previous year (1,301 against 1,105). The pay of the constabulary in the Madras City was raised in September. It is hoped that a similar increase in the mufassal, which has just been sanctioned, will result in at least reducing the number of vacancies. **Strength.**

130. There was an increase in the number of casualties in the permanent force, which was mainly attributed to the enlistment of temporary men who were generally an unsatisfactory lot. The health of the force is reported to have been on the whole good except in malarial tracts. The number of deaths was less than in the previous year (378 against 422). **Health.**

131. There was a slight rise in the percentage of punishments both for absence without leave and for other offences. So far as the former offence was concerned an increase was conspicuous in Jeypore; in this district 49 men of the armed reserve had to be punished in a body for non-attendance at the daily parade. The average was exceeded in 13 districts including Jeypore. The number of dismissals was 356 against 276. There was again a satisfactory fall in the number of suspensions, but the number of blackmarks awarded in some districts was excessive. 6,644 deferred **Conduct.**

punishments were awarded during the year and 2,458 were pending final orders at its commencement ; this system has certainly a salutary effect when applied to occasional defaulters, as it gives them a chance to improve. There was a progressive decrease in the number of police officers and men judicially punished, from 231 in the preceding year to 223, 129 being convicted of offences committed in their official capacity and the remaining 94 of offences committed in their private capacity. Three officers were awarded the King's Police Medal during the year and four officers received titles. There was a further satisfactory increase in the rewards granted both to members of the police and to private individuals.

Education.

132. There was a slight increase in the percentage of illiterate constables, due to the difficulty in securing literate men. The forces of three districts, viz., Coimbatore, the Nilgiris, and the Trichinopoly Railway Police, contained no illiterates. The Provincial Training School, Vellore, continued to be managed satisfactorily ; the Principal reported favourably on the capacity, work and general conduct of the Sub-Inspectors selected during the year. Instruction in riding, Jiu-jitsu, and Swedish drill was given and games were played regularly.

Cost.

133. The cost of the department in 1915 was Rs. 97 lakhs against Rs. 95 lakhs in 1914. Excluding the sum of Rs. 23,000 under "Special Police," the expenditure under which is ultimately recovered from the parties concerned, the actual increase amounted to Rs. 1·77 lakhs. This was due to the renting of houses for the constabulary, larger expenditure on travelling allowances and rewards, and the continuance of the additional Deputy Inspector-General.

Village police.

134. Members of the force of all ranks were instructed to work for greater co-operation by village officers. An appreciable improvement in patrolling villages and looking after criminals can and should reasonably be expected from the village police when the present staff is increased. Meanwhile it is gratifying to note the growing number of instances of active help rendered by the village police in several districts.

Armed reserves.

135. The armed reserves at district headquarters and the special forces were generally maintained at full strength. The reserves were on the whole well disciplined and efficient. There can be no doubt that the annual police sports at Vellore have had and continue to have a most beneficial effect on the efficiency of the reserves. Some reserves were mobilized on special occasions ; the men of the Calicut reserve and the Malappuram special force behaved excellently at the time of the Mappilla outbreak and their services were duly acknowledged by Government.

Railway police.

136. The bulk of the crime on the railway is theft, which showed a decrease during the year ; thefts from the railway mail were few. There was a further satisfactory decline in the number of complaints perferred by the railway authorities about missing articles. Detection did not improve; a smaller amount of property was lost than in the preceding year, but there was also a falling off in the percentage of property recovered. The system of seal checking of waggons independently by the railway police continued to work well. There were 8 minor cases of attempt at train-wrecking, none of which could be detected. The number of collisions was 7 and of derailments 16. Two hundred persons were run over and killed, a record figure for the last five years.

Crime.

137. The season was generally more favourable than in the previous year and prices of food-grains again went down. There was, however, an increase in grave crime. The true cases of cognizable crime under the Indian Penal Code, excluding nuisances, were 54,474 against 53,178 in 1914 ; this figure approximated to that for 1913 and exceeded that for 1914 by 1,296. The increase was noticeable in the Northern and Western Ranges. In Madras City and the Central and Southern Ranges, there was a decrease. Offences under special and local laws were fewer. That there was an increase of crime in spite of a fall in prices of food-stuffs indicated a greater amount of activity on the part of the habitual criminal on whom the fluctuations in prices

have little or no effect, and a want of efficiency on the part of the police in regard to preventive work and watching of criminals. The abnormal conditions owing to the war may have also contributed to some extent. There was, however, reason to believe that the registration of cattle-theft in many districts was more satisfactory. With the exception of murder there was an increase under every head of crime, particularly under house-breaking and cattle-theft, resulting in a total increase of 1,424 cases ; the number of murders was 702 against 704, so many as 102 cases being returned by Coimbatore alone, which as usual headed the list ; Madura came next with 60 cases. The decrease in Rāmnād and South Malabar was also appreciable. A noteworthy case was the murder of the Sarishtadar of the Chittoor District Court in broad daylight on his way to the office. There were no serious riots during the year, but an outbreak of Mappilla fanaticism occurred in parts of the Ernad and Walluvanad taluks of the Malabar district in February. For some time previously, dating back to an early period of the war, there had been excitement and unrest among the Mappillas owing to an idea that the British Government was coming to an end, which had manifested itself in an outbreak of crime in those parts. A plot was laid unsuccessfully to murder the District Magistrate. In Vizagapatam district a party of police officers who went to a village to search the houses of certain persons in connection with a burglary were brutally attacked and beaten by a number of villagers and one constable died from the effects of injuries received by him. Dacoities numbered 562 against 555 in the previous year ; Anantapur reported the largest number and was followed by Bellary and Trichinopoly. In fourteen districts there was an increase, which was marked in Anantapur, South Malabar and Trichinopoly ; in the first district it was said to be due mostly to escapes from the criminal settlement at Bhumannagadda in Chittoor district. Robberies also showed an increase (1,079 against 918), but it was satisfactory to note that when compared with 1912, the figures for 1915 show a marked fall. There was a considerable rise in the number of cattle-thefts (4,161 against 3,575), but most of the increase was attributed to the greater willingness on the part of the people to prefer complaints of missing cattle to the police. 5,746 cattle were branded in Madura by means of chemicals, and the branding system in Jeypore district was said to be working well.

Detection and prevention of crime.

138. The total number of cases of cognizable crime under the Indian Penal Code, excluding nuisances, reported to the police during the year was 52,480. Investigation was refused in 2,288 cases, 11,751 were found to be false, or due to mistake of fact or law, etc., and 6,600 were pending at the close of the year. Of the rest, 11,597 ended in conviction, 4,343 were discharged or acquitted, 21,074 were returned as undetectable, and 1,555 were compounded, etc. The percentage of detection reached 25·7 against 25·1 in 1914 ; in 13 districts the percentage was below the average, the figures relating to Madura and Nellore being the lowest (15·9 each). The opinion was held in some quarters that one of the directions in which reform was needed was to abolish the Circle Inspector and to place the Sub-Inspector under the direct control and supervision of an Assistant or Deputy Superintendent, the number of these officers being increased. An experiment of this kind was recently introduced in the Trichinopoly district and its results are awaited. The percentage of property recovered to that lost continued to rise, but was still only 22 per cent. There was again an increase in the total number of cases decided as well as in the percentage of successful prosecutions, which reached 72·8 against 72·6 in 1914. There was a noticeable improvement in Bellary, Vizagapatam, South Arcot and Rāmnād and an appreciable falling off in Tinnevelly and the Nilgiris. Escapes from police custody numbered 158, and 114 of the runaways were recaptured. One of the two police constables of Kurnool district whose negligence led to the escape of the prisoners from their custody shot himself, evidently to evade prosecution. There was a further, though slight, decline in the cases struck off as "maliciously and wilfully false."

Preventive work and criminal gangs.

139. In regard to gangs newly registered, there was a small increase in the number of known depredators and a large one in the number of suspects. The number of bad characters at large was 24,860, of whom 8·4 per cent were out of view. Madras City and Ganjām showed much higher percentages than the average, though the figures were less than in the preceding year. The relations between the Madras Police and the French Police at Pondicherry and Karikal were satisfactory. It was reported that the French authorities had at last taken steps to stop the import of seditious literature. Section 10 (*b*) of the Criminal Tribes Act, notifying residence, etc., was made applicable to every registered member of five tribes living in six districts and 3,856 persons were registered under the Act. The five criminal settlements were working successfully and two others, namely, settlements at Stuartpuram in Guntūr and Stuartpet in South Arcot, were notified; excepting two all were under the charge of the Salvation Army. Difficulty in finding employment was again experienced and an experiment was made in allowing 165 persons to go from Nellore district to the Anamalais to work in the plantations. The prisoners' homes in Madras City and Guntūr did good work. The experimental school for children of members of criminal tribes, which is still in its infancy, has not attracted many children as yet. Good work was done in Kistna district in running down and breaking up criminal gangs. There was an increase in the number of old offenders convicted under section 75 of the Indian Penal Code and in the number of persons ordered to notify their residence under section 565 of the Criminal Procedure Code. The number of persons put up under the preventive sections was somewhat smaller than in the preceding year. In Madura the number bound over was the largest during the past five years, which fact, however, had no effect on crime. Of the 1,774 persons bound over, 1,146 were sent to jail.

Criminal Investigation Department.

140. Enquiries into the circulation of counterfeit coins were conducted in the western and southern districts of the Presidency and Ganjām. The same vigilance as before was exercised in the seizure of seditious literature. Further progress was made in the registration of wandering tribes and 930 members were registered, the total number registered up to the close of the year being 4,594.

Finger Print Bureau.

141. There was a further increase in the number of references to the Finger Print Bureau asking for the antecedents of suspected persons, and the number of successful identifications was 3,462 or 21·3 per cent (about the same percentage as in the previous year). The number of finger-print impression slips received for record was 13,074.

CRIMINAL JUSTICE. (1915.)

[*Statistics of the Criminal Courts in the Madras Presidency for the year 1915; Statistics of British India, Part VI, Administrative and Judicial—Criminal Justice.*]

Courts.

142. On the 31st December 1915 there were in the Madras Presidency the following Criminal Courts, viz., the High Court, 25 Sessions Courts (including 3 for Agency tracts), 4 Additional Sessions Courts in Agency tracts, 25 District Magistrates' Courts, 2 Additional District Magistrates' Courts, 4 Presidency Magistrates' Courts, 101 Subdivisional Magistrates' Courts, 21 Courts of Joint, Assistant and Deputy Magistrates without Divisional charges, 442 Subordinate Magistrates' Courts (including 126 Tahsildar-Magistrates' Courts), 110 Benches of Magistrates (on which 730 Honorary Magistrates' had seats), 81 Special Magistrates' Courts, 4 Cantonment Magistrates' Courts, and 5 Honorary Magistrates' Courts. This year 14 new Bench Courts were established, 4 in North Arcot, 4 in Rāmnād, and 2 in South Arcot; in South Canara, 2 Bench Courts on a

new model under non-official presidents were substituted for previous Courts under official presidents. 4,314 village magistrates exercised jurisdiction. The number was less than in 1914 (4,526) and the average for the preceding five years (4,348). Opinions still differ as to whether litigants prefer a cheap Court or the greater dignity of a more expensive Court. The total number of original cases instituted in the Criminal Courts during the year was 338,387 or 6,445 less than in the previous year; the Presidency town contributed 57,044 cases, Tanjore 22,587, Madura 21,250, and South Arcot 20,183. The number of appeals preferred rose from 9,845 to 10,619.

Village Courts.

143. In the Village Magistrates' Courts the total number of cases instituted rose from 12,444 in 1914 to 12,669 and the number of persons tried by these Courts also rose from 21,007 to 21,597 in 1915. Of these 17·94 per cent were convicted against 20·5 per cent in 1914.

Original cases.

Regular Magistrates' Courts.

144. The number of cases instituted in the regular Magistrates' Courts in the mufassal was 267,257 against 272,151 in 1914, of which 3,716 were pending at the end of the year against 3,612 in 1914. The average duration of a trial was 6·8 days against 6·6 in the previous year; before Bench Courts and Special Magistrates the average duration was 2 days, before Sub-Magistrates 9, and Joint Magistrates 26. The total number of cases instituted in the Presidency Magistrates' Courts was 57,010 against 58,757 in 1914. A decrease in the cases under the Workman's Breach of Contract Act was due to a fall in the number of contracts entered into in consequence of depression in local trade as a result of the war. The decline in the number of cases under the City Police Act was attributed to the deficiency in the strength of the constabulary, and to the closer supervision now exercised in order to prevent irregularities in connection with these prosecutions. The number of cases committed to Sessions Courts in the mufassal was 1,417 against 1,409 in 1914; the Courts to which the largest number of cases was committed were the Courts of Coimbatore and South Malabar (111) and North Arcot (95). The noticeable fall in Guntūr was ascribed to the fact that some members of the wandering tribes of Yerukalas and Yanadis were convicted in 1913 and 1914 and also to the establishment of criminal settlements in the district. The number of cases pending in all the Courts was 46 at the end of the year against 58 at the end of 1914. The average duration of cases before Sessions Courts fell from 44 to 40 days; 3,565 persons were under trial, and of these 1,654 or 46·4 per cent were discharged or acquitted. Thirty-four cases were committed to the High Court Sessions against 71 in the previous year.

Presidency Magistrates' Courts.

Sessions Courts.

The High Court.

Appeals.

Magistrates' Courts.

145. Of the persons sentenced by Second and Third-class Magistrates, 16,129 appealed to First-class Magistrates as against 14,990 in the previous year, and the appeals of 849 persons were pending at the end of the year as against 709 at the end of 1914. The average period which elapsed between the presentation of an appeal and its disposal in the Courts of Subdivisional Magistrates was 19 days against 21 days in the previous year. The percentage of successful appellants fell from 33 in 1914 to 31.

Sessions Courts.

The number of persons who appealed to Sessions Courts against the decisions of First-class Magistrates was 2,374 against 2,171 in 1914, and the average duration of an appeal in the Sessions Courts rose from 29 days in 1914 to 31. The percentage of appellants who had their convictions reversed or the proceedings quashed was 20·2. The number of appellants to the High Court was 1,255 against 1,089 in 1914; the Government appealed against the acquittal of 36 persons, the average for the preceding five years being 63. In the case of 492 appellants their appeals were rejected; the sentences on 114 persons were reversed, on 380 were confirmed and on 152 the sentences were reduced or otherwise altered. The average duration of an appeal was 47 days against 40 days in 1914.

The High Court.

Reference and revision.

146. The number of applications for revision presented in the District Magistrates' Courts was 553 against 498 in 1914. The District Magistrates took up 49 cases *suo motu* or on reports from their Subdivisional

Magistrates against 48 in the previous year. In Sessions Courts 442 applications for revision were presented or 21 more than in the previous year ; and the number of cases taken up *suo motu* by the Sessions Judges was 94 against 72 in 1914. 734 revision petitions were received in the High Court ; 109 cases were reported by District Magistrates and Sessions Judges and 69 were taken up by the High Court *suo motu*. Death sentences on 73 persons were referred to the High Court for confirmation under section 374 of the Criminal Procedure Code ; the sentences on 42 persons were confirmed, those on 15 persons were modified and those on 14 persons were reversed and they were acquitted. Of the cases referred by the Sessions Judges under section 307, Criminal Procedure Code, on the ground that the verdicts were wrong, the verdicts on 20 persons were upheld and those on the remainder (2 of "guilty" and 24 of "not guilty") were reversed.

The Jury system.

147. The number of persons tried by juries was 1,308, and in the case of 1,222 persons the Judge approved of their verdict. The number of persons tried with the aid of assessors was 1,734 ; in the case of 1,117 persons the Judge agreed with all the assessors, in the case of 222 he differed from one or more of them, and in the case of 395 persons he differed from all the assessors. The jury system was reported to have worked with only moderate success ; the chief reason for this was said to be that juries found great difficulty in following complicated evidence.

Miscellaneous.

148. The number of witnesses detained for over three days was still large both in Magistrates' Courts and in Sessions Courts. Of the total

Punishments.

number of sentences passed during the year 43 were of death, 247 of transportation, 1 of penal servitude, 19,843 of rigorous imprisonment, 5,517 of simple imprisonment and 278 of forfeiture of property ; 89 per cent of the sentences consisted of fines. The amount of fines was Rs. 11 lakhs, and over half a lakh was paid to complainants under section 545, Criminal Procedure Code. 1,810 persons were ordered to give security for good behaviour, and for failing to give such security 1,214 persons were imprisoned. Of the total sentences of imprisonment passed, 3,818 were for periods of 15 days and under (apart from those passed by village magistrates) ; the number of short sentences was still large and improvement in this direction was very slow. 390 persons were released on probation of good conduct under section 562, Criminal Procedure Code,

Stocks.

as against 344 in 1914. The number of persons confined in stocks, which had fallen from 1,188 in 1913 to 972 in 1914, fell still further to 812 in 1915 ; this form of punishment will be abolished altogether when the Village Courts Bill becomes law. Meanwhile the Government desire it should be used only in exceptional cases.

Juveniles.

149. 3,280 boys and 528 girls were under trial during the year ; of those who were convicted, the sentences of 50 were commuted to detention in the Reformatory School, 22 were discharged after admonition and 12 were delivered to their parents or guardians. In some districts it was found that owners of cattle sent boys to graze them under the belief that, if the boys committed any offence, they would be let off without punishment. It was satisfactory that the number of youthful offenders under the age of 15 decreased from 207 in 1913 and 119 in 1914 to 33.

PRISONS. (1915.)

[*Report on the Administration of the Jails of the Madras Presidency, 1915 ; Statistics of British India, Part VI, Administrative and Judicial—Jails.*]

Accommodation.

150. The number of central and district jails remained the same as in the previous year, viz., 9 and 5 respectively ; but the number of subsidiary jails which was 315 at the beginning of the year increased to 319 owing to the opening of new sub-jails at Pamarru (Kistna district), Tanakallu

(Anantapur district), Kamalapuram (Cuddapah district) and Dusi (North Arcot district). At the end of the year accommodation was available in central and district jails and the Civil Jail, Madras, for 12,086 prisoners as against 12,108 at the beginning, the reduction being chiefly due to the demolition of an association ward at the Coimbatore Central Jail to make room for a block of cells, the construction of which was sanctioned. The daily average in these jails was 9,812 ; thus accommodation was sufficient though there was occasional overcrowding in individual jails such as Vellore, Coimbatore and Madura among quarantine prisoners and in the Penitentiary, Vizagapatam, Berhampur and Coimbatore among male convicts and in almost all jails among civil prisoners.

Prisoners.

151. The year opened with a population of 11,852 prisoners of all classes ; 94,595 were received and 93,910 were discharged leaving 12,537 in confinement at the close of the year. The daily average advanced from 11,326·92 in 1914 to 12,181·25 in 1915. The number of under-trial prisoners who remained in custody at the beginning of the year was 1,923, and 41,024 were received during the year. The daily average was 2,034·70 as compared with 2,008·87 in the previous year and the number remaining at the end of the year was 1,813. Among this class of prisoners there were 40 escapes, all occurring in sub-jails, and 17 deaths. Of the number disposed of, 54·33 per cent were acquitted or discharged and 38·21 per cent were convicted and sentenced. The average period of detention of sessions prisoners was 33·88 days and of prisoners awaiting trial before Magistrates, 14·75 days. The averages of the preceding year were 30·23 and 12·44 days. On the 1st January 1915, there were 597 civil prisoners in custody, 4,206 were committed during the year and 4,147 were released, 2 were transferred and 8 died, leaving 646 in jails at the end of the year. The daily average was 471·53 as compared with 368·17 in the previous year. Five State prisoners remained in jails at the beginning of the year and five were received ; three were released and one was transferred to Calcutta.

Under-trial prisoners.

Civil prisoners.

State prisoners.

Convicts.

152. On the 1st January 1915, the convict population stood at 9,121 males and 211 females. During the year 22,817 males and 1,068 females were received by direct committal, as compared with 20,906 males and 1,083 females in 1914. At the end of the year there were 9,830 males and 248 females remaining in confinement. The daily average number of convicts was 9,675·02 as against 8,949·88 in the preceding year. Of the convicts discharged during the year, 2,931 were released on appeal, 225 under the special orders of Government, on account of sickness, on condition of residence in criminal settlements or for having undergone long periods of imprisonment ; 88 were transported beyond seas, 9 remained at large having escaped and 45 were executed. Christians formed 3·10 per cent, Muhammadans 9·96 per cent and Hindus 86·94 per cent of the admissions ; 2,677 convicts, or 11·21 per cent, were previously convicted. Only 33 youthful offenders under the age of 15 (30 boys and 3 girls) were admitted to jails as convicts and of these, 9 boys and 3 girls served their sentences in jail, the remaining 21 boys being transferred to the Reformatory School at Chingleput. The reduction in the number of youthful offenders committed to jail from 489 in 1906 to 33 in 1915 is very satisfactory. The Tanjore Jail for adolescents continued to be well managed, the daily average number of boys who were brought under the special treatment being 238·27. An Uriya teacher was added to the staff and his work was efficient.

Juveniles.

Conduct.

153. There were 17 escapes during the year as compared with 9 in the previous year ; of the former 15 were from inside and 2 from outside the jail. The largest number of escapes, viz. 7, occurred from the Central Jail, Salem, and all concerned were habituals. Eight of the prisoners who escaped during the year were re-captured as also one other who had escaped previously. The number of offences and punishments declined, the former from 9,906 to 8,799 and the latter from 10,011 to 8,859. There were only seven cases of whipping, all of them being in the Salem Central Jail. There was a marked decrease in the number punished with handcuffing and fetters, and only 786 convicts were fettered for

purposes of safe custody. The ratio of punishments to the daily average population (12,181) was 91·57 as compared with 111·86 in 1914. The conduct of prisoners was generally satisfactory during the year ; the only instance of a combination against authority occurred among the habituals in the Salem Central Jail. The prisoners refused their food, but no violence occurred. The trouble subsided when they were too hungry to go without food any longer. At the beginning of the year 3,373 habituals remained in confinement and 3,625 were admitted during the year, making a total of 6,998. They formed 26·72 per cent of the total convict population but received 50·60 per cent of the punishments and all the seven whippings. The number of convicts released under the remission rules was 2,866. Eight convicts who came under the remission rules failed to earn any remission, and 9 convicts sentenced to imprisonment for less than one year earned special remission under Rule 324, Jail Manual. The maximum remission of 916 days was earned by a lifer released from the Salem Central Jail, and the highest gratuity of Rs. 49–14–6 was earned by another lifer at the Penitentiary. Special remission was awarded to 1,750 convicts for not committing any offence for a period of one year. The system of paying prisoners cash or awarding remission for extra work turned out was in force throughout the year, but the benefit is being only gradually realized by the prisoners. The work of the convict schools in all the first-class central jails and in the second-class Central Jail of Salem was favourably reported on. The strength of the classes was on the increase and the paid teachers were assisted by selected literate and well-behaved convicts. Officers of the Educational Department inspected the schools at Coimbatore, Vellore, Salem and the Penitentiary and their reports have been encouraging and contained valuable suggestions which have been carried out. The scheme of imparting education has been extended to the remaining second-class central jails and the district jails and the pay of the teaching staff has been improved. Religious and moral instruction was imparted in nearly all jails by various gentlemen, and lectures were also delivered by ladies to female convicts in the jails at Vellore and Vizagapatam.

Habituals.

Remissions.

Education.

Vital statistics.

154. The number of prisoners admitted to hospital declined from 4,569 in 1914 to 4,297, as also the ratio per mille of average strength from 403·38 to 352·76. There were 134 deaths during the year, cholera accounting for only three deaths. The ratio of deaths per mille of average strength was only 11·00 as compared with 11·83 in the previous year.

Sanitation.

155. Improvements were effected to the wells at Rajahmundry and Coimbatore and a new well was sunk at Trichinopoly. Salamanders for boiling drinking water were supplied to the Bellary Central Jail. At Vizagapatam, the wooden barrels for storing drinking water were replaced by masonry cisterns with sheet iron covers and tape. The kitchen at Tanjore was rendered fly-proof and important improvements were carried out in the kitchens at Vizagapatam and Palamcottah. Fly-proof latrines were built at Rajahmundry and Coimbatore, cage latrines were fixed to the association wards in the Penitentiary and an additional torfit urinal was provided in the Coimbatore Jail.

Financial.

156. Excluding the outlay by the Public Works Department on buildings, the expenditure of the year was Rs. 15,08,503, which was less than that of the previous year by Rs. 34,055. The total cost and the cost per head of diet increased from Rs. 4,36,082 and Rs. 39–12 8 to Rs. 5,00,316 and Rs. 42–11–7 respectively. This was mainly due to the higher prices paid for dhal and condiments. The average cost to the State for maintaining a prisoner rose from Rs. 84–6–11 to Rs. 84–11–1. The net cash earnings under manufactures amounted to Rs. 1,62,653 as compared with Rs. 1,55,321 in the previous year, and the value of convict labour supplied to the Public Works Department was Rs. 8,267. The net cost of maintaining prisoners advanced from Rs. 8,01,027 to Rs. 8,68,997 as also the net cost per head of average strength from Rs. 70–12–0 to Rs. 71–5–0. The expenditure on jail buildings, including money spent by the Public Works Department, amounted to Rs. 1,58,762–9–8.

CIVIL JUSTICE. (1915.)

[*Statistics of the Civil Courts in the Madras Presidency for the year 1915; Statistics of British India, Part VI, Administrative and Judicial—Civil Justice.*]

Courts.

157. On the 31st December 1915, there were in the Madras Presidency the following permanent Civil Courts, viz., the High Court, the Presidency Court of Small Causes, the City Civil Court, 25 District Courts (including 3 for Agency tracts), 30 Subordinate Judges' Courts (including 11 for Agency tracts and 1 Revenue officer exercising the powers of a Subordinate Judge), 156 District Munsifs' Courts (including 22 for Agency tracts and 4 Revenue officers exercising the powers of District Munsifs) and 127 Revenue Courts. At the end of the year there were 18 temporary Subordinate Judges' Courts and 26 temporary Additional District Munsifs' Courts. Two new Subordinate Judges' Courts were established in Salem and Nellore. An Additional Sessions Judge for Bellary was appointed in June who exercised the powers of a Subordinate Judge till the middle of December. The Additional Sessions Judge of Coimbatore, who continued to work from last year, exercised the powers of a Subordinate Judge till July. It was found necessary to continue all the temporary Munsifs' Courts except two. In addition 5 new courts had to be opened during the year owing to the pressure of work and accumulation of arrears. Two members of the Indian Civil Service were appointed to undergo judicial training. No such appointment had been made since 1896. Unlike the practice in some other provinces, members of the Indian Civil Service in this Presidency receive no training in civil law otherwise than in the trial of suits under the Madras Estates Land Act and of a few suits relating to village offices. The scheme of training which has now been inaugurated will, it is hoped, ensure that officers will acquire a considerable knowledge of civil law both in theory and practice. In addition to the regular courts, 6,007 Village Courts exercised civil jurisdiction against 6,121 in 1914.

Litigation. Number of suits.

158. The total number of suits instituted in the Presidency in 1915 was 555,020 against 488,979 in 1914, the highest figure on record till then. For the Presidency as a whole, one suit was instituted for every 75 persons of the population as against one for every 85 persons in 1914, and the ratio for the Presidency town was one for every 25 persons, as in last year. In the mufassal, North Malabar showed itself again the most litigious district with one suit for every 34 persons and, apart from the Agency tracts, Bellary was again the least litigious with one suit for every 240 persons.

Nature of suits.

159. The number of suits instituted for money or movable property was 481,014 or 86·67 per cent of the total as against 85·34 per cent in 1914. The number of suits of this class in 1914 was 417,289 and practically the entire increase in the file occurred under this head. The number of suits for immovable property other than mortgage suits was 21,707 against 22,218 in 1914, and the number instituted in Revenue Courts was 21,751, or only 42 less than in the previous year. 24,724 mortgage suits were instituted against 21,809 in the previous year, but suits for specific relief declined to 4,723.

Value of suits.

160. The total value of suits instituted in 1915 in Courts other than Village and Revenue Courts and unpaid tribunals was Rs. 781·31 lakhs or Rs. 1·38 lakhs more than in the previous year, but the value was higher than in any other previous year, except 1912, in which the figure was exceptionally high. The average value of each suit was less than in preceding years, being only Rs. 202. The number of suits above Rs. 500 in value was 21,968 against 19,442 in 1914—the highest figure on record.

Percentage of successful plaintiffs.

161. Apart from suits compromised or disposed of without trial, plaintiffs in 78·09 per cent of the suits disposed of succeeded in obtaining decrees for the whole or part of the relief claimed, against 76·36 per cent

in 1914 and an average of 75·03 for the preceding five years. These figures seemed to show that litigation was not to any considerable extent speculative.

Number of appeals.

162. The number of appeals preferred in 1915 was 15,631, or 561 less than in the previous year ; the average for the five years ending with 1913 was 14,987.

Courts of Original Jurisdictio

Village Courts.

163. The total number of suits instituted in Village Courts was 145,587 against 118,647 in 1914, an increase which was most satisfactory. The number of suits disposed of by village munsifs sitting alone rose from 107,332 in 1914 to 121,189 in 1915 and that by benches rose from 11,063 to 22,656. The number of suits tried by village munsifs would be greater in some districts if the litigants did not feel that the village munsifs tend to take sides with the factions in their villages.

Revenue Courts.

164. The total number of suits filed in Revenue Courts other than in Agency tracts decreased slightly to 21,664. The fall was most marked in Chittoor, Chingleput and Kistna, but there was a large increase in Trichinopoly, Tanjore and Rāmnād. The total number of suits disposed of in 1915 was 22,716 against 24,215 in 1914 and there was a slight reduction in the arrears. The average duration of contested suits fell from 177 days in 1914 to 173 days in 1915 and that of uncontested suits from 102 days to 90. The proportion of appeals preferred from the decisions of Revenue Courts to appealable decrees passed by them fell from 11·2 in 1914 to 8·19.

Agency Courts.

165. The number of suits instituted in Agency Courts was 1,415 against 1,580 in 1914. The number of suits disposed of was 1,486, and 240 were left pending at the end of the year against 274 in the previous year. The average duration of contested suits fell from 117 in 1914 to 94 days and that of uncontested suits from 54 to 50.

District Munsifs' Courts.

166. In the District Munsifs' Courts other than those for the Agency tracts, 106,441 ordinary suits were instituted, which was 2,416 less than in the previous year and 8,106 less than in 1912 when the highest figure was recorded. The average disposal for each court during the year was 2,144 against 1,924 in 1914 and 2,031 in 1913. Of the ordinary suits disposed of 55,875 were contested against 56,012 in 1914. The arrears of ordinary suits fell from 54,000 at the end of 1914 to 52,611 at the end of the year under review, but the arrears of small causes increased from 18,532 to 23,873. The figures given above again showed that the existing District Munsifs' Courts, in spite of their continually increasing numbers, were barely able to keep pace with the steady increase in litigation and several new courts had also to be added in the current year. The average duration of contested ordinary suits was 339 against 345 days in the previous year. The average duration of uncontested ordinary suits was the same as in last year (55 days); the figures of duration showed only a slight improvement on those of the previous year. The trial of contested original suits on an average now takes about 200 days more than it did thirty years ago and this enormous increase in duration cannot be viewed lightly.

District and Subordinate Judges' Courts.

167. In the Subordinate Judges' Courts other than those for the Agency tracts, 2,242 ordinary suits and 29,263 small cause suits were instituted during the year against 2,102 and 33,387 in 1914 and the average of 1,671 and 28,761 for the five years ending 1913. The number of ordinary suits disposed of rose from 2,327 in 1914 to 2,512 and the arrears also increased from 2,329 to 2,416 in 1915. 31,347 small cause suits were disposed of and the pendency was reduced from 6,349 to 4,972. The average duration for contested ordinary suits exceeded 250 days in all the Subordinate Judges' Courts except three ; in three courts it rose to about 950 days. In the District Courts other than those for Agency tracts, 522 ordinary suits were instituted during the year against 488 in 1914. The number of ordinary suits disposed of was 353 against 361 in 1914 and the arrears increased from 571 to 658. The average number of days which a District Judge was able to devote to civil work was 120 days against 123 in

1914. The number of ordinary suits disposed of by District Judges after trial was a very small and lessening proportion of the total number of important suits disposed of by the superior courts. The average duration of ordinary suits in District Courts was 570 days against 464 in 1914 in the case of contested suits, and 128 days against 111 in 1914 in the case of uncontested suits.

City Civil Court.

168. In the Madras City Civil Court, 470 suits were instituted against 405 in 1914 and 460 in 1913. The Judges disposed of 588 suits, of which 413 were contested and the rest uncontested. The arrears declined considerably. The average duration of contested suits fell from 421 days in 1914 to 387 in 1915, but that for uncontested suits rose slightly.

Presidency Court of Small Causes.

169. In the Presidency Court of Small Causes the number of suits instituted was 19,540 against 19,904 in 1914. The number of suits disposed of was 19,836 and the arrears decreased from 1,378 in 1914 to 1,106. The average duration of contested suits rose to 32 days.

The High Court.

170. In the High Court the number of suits instituted or received by transfer was 542 against 448 in 1914 and 406 in 1913. The number of suits disposed of was 566 against 551 in 1914 and the arrears further decreased from 381 to 367, the lowest figure reached since 1908. The average duration of contested suits was 427 days. On the outbreak of war, the High Court was invested with prize jurisdiction, but no prize work came before the Court.

Insolvency.

Mufassal Courts.

171. The steady increase noticed in the past year in the number of insolvency petitions presented to the mufassal courts was maintained in 1915, the number instituted being 2,140 against 2,025 in 1914. The number of persons adjudged insolvent was 1,303. Creditors' claims were admitted for Rs. 9,80,168 and the assets distributed were Rs. 2,41,875.

The High Court.

The number of insolvency petitions presented in the High Court during the year was 337 against 346 in 1914 and 253 were disposed of. The claims admitted during the year totalled Rs. 7,40,354 and the amount paid as dividend to creditors was Rs. 1,88,306.

Appellate Courts.

Agency Courts.

172. The number of appeals filed in the Agency tracts rose from 80 to 123 in the year under review. The number of appeals disposed of was 119 and 11 were left pending at the end of the year. The average duration of appeals in these courts was 31 days against 46 in 1914 and 35 in 1913, and the percentage of confirmation was 34·45 against 50·57 in 1914.

District and Subordinate Judges' Courts.

173. In the District and Subordinate Judges' Courts the number of appeals filed was 12,200, the average being 11,775, and the disposals were 12,705. Regular appeals pending for more than six months rose from 2,960 to 3,356 at the end of 1915. The average duration of appeals disposed of after trial was 277 days against 280 in 1914.

The High Court.

174. The number of appeals from original decrees of the mufassal courts filed in the High Court in 1915 was 451 against 433 in 1914; these figures showed an increase in the heaviest class of work which came before the Court. The number disposed of was 538 against 513 in the previous year and the arrears decreased from 937 to 850. The average duration of appeals disposed of was 650 days against 883 in 1914. The number of Letters Patent Appeals (other than Original Side Appeals) filed was 243. The number of appeals received against appellate decrees was 2,197 against 2,628 in 1914. The marked decrease in the second appeals may be due to the fact that these appeals were posted immediately for admission before a Bench of two Judges, and this procedure probably resulted in checking a tendency to file futile appeals.

Reference and Revision.

The number of revision petitions filed in the High Court was 1,091, of which 566 were for the revision of decisions in small cause suits, against 1,121 and 697 respectively in 1914. The number of petitions disposed of was 1,306 against 1,062 in 1914 and the arrears fell from 1,510 to 1,295. The number of cases referred by the lower courts to the High Court was 15. Seventeen cases were left pending at the end of 1914 and of the 32 cases for disposal, 15 were disposed of.

Miscellaneous. Execution.

175. The total number of applications for execution received in all the courts in the mufassal taken together except, village courts, was 335,847 against 313,061 in 1914. Satisfaction was obtained in full in 16·45 per cent, in part in 7·58 per cent of the applications disposed of, and the number of wholly infructuous applications rose from 233,829 to 252,258. The number of debtors imprisoned in execution was 3,169 against 2,871 in the previous year. 436 judgment-debtors were imprisoned in execution against 454 in 1914.

Inspection.

176. The number of courts inspected by District Munsifs rose considerably during the year, and it is seen that nearly all the permanent District Munsifs did some inspection. One hundred and six District Munsifs' and Sub-Judges' Courts were inspected.

Finance.

177. The total receipts of civil and criminal courts in the Presidency in 1915 amounted to Rs. 1,07,78,125 and the charges to Rs. 86,38,907 leaving a surplus of Rs. 21,39,218. The charges included money spent on the upkeep of buildings and all other charges except pensions and cost of new buildings.

Shorthand writers.

178. District and Subordinate Judges and a number of District Munsifs of the first grade have recently been empowered to deliver judgments by dictation to a shorthand writer. This relieved the Judges of a good deal of scriptory work.

REGISTRATION AND COMPANIES. (1915.)

[*G.Os. No. 1181, Judicial, dated 8th May 1916 and No. 1625, Judicial, dated 24th June 1916; Statistics of British India, Part II, Commercial, and Part VI, Administrative and Judicial—Registration—Indian Companies Act.*]

Offices.

179. Financial pressure prevented the opening of any new offices and the number (513) remained the same.

Registration.

180. With the outbreak of the war in August 1914 registrations declined rapidly owing to the dislocation of the money market and of trade, and this continued until July 1915, after which there was a perceptible improvement evidently due to the fact that the inevitable misgivings and commercial unrest that prevailed in the early stages of the war grew less intense. The fall of 11·4 per cent in the first seven months was counterbalanced partly by an increase of 12 per cent in the last five, with the result that the total transactions of the year (1,285,051) showed a decline of only 2·85 per cent. The recovery was only partial in parts of North and South Arcot, Tinnevelly and Madura, the chief tracts producing groundnut and cotton. There were other causes such as floods and epidemics or the favourable season, which led to a fall in particular localities. The decline was wholly in registrations relating to immovable property. Improved regulations resulted in a marked decline in the number of documents refused and returned by post, and a satisfactory increase occurred under applications for encumbrance certificates. With the expansion of the co-operative movement the number of documents registered by or on behalf of those societies increased.

Prosecutions.

181. Of the cases under the Act, nine ended in conviction, two in acquittal and one was withdrawn, leaving four pending.

Finance.

182. The total income fell from Rs. 22·81 lakhs to Rs. 22·71 lakhs. To meet this, tours were restricted as far as possible and expenditure was generally reduced. A large number of temporary hands were dispensed with owing to the decline in registrations.

Registered Companies.

183. The year opened with 406 working companies, 360 limited by shares and 46 by guarantee; 20 were registered, 18 limited by shares and 2 by guarantee. 39 companies, 35 limited by shares and 4 by guarantee,

ceased to exist, i.e., were either wound up or removed from the register. There were 387 working companies at the close of the year, 344 limited by shares and 43 by guarantee. The fall in registrations which still continued was due, as in 1914-15, mainly to the war. The beneficial effects of the existing Act in restricting the launching of bogus companies and the spread of societies under the Co-operative Societies Act also had their effect. So far as nidhis were concerned, the drop which synchronised with the introduction of the present Act has been arrested to a small extent and this may be attributed to the relaxation in their case of some of the provisions of the Act. A noticeable feature is the increase in the registration of "private companies" started and managed by Indians. Of the twenty companies registered during the year, four were registered in the Coimbatore district, which ranked next to Madras in numbers; seven dealt with banking and loans, eight were trading companies, and one insurance company was started to promote the spiritual advancement of its members by affording them facilities for pilgrimage. Twenty-one companies went into voluntary liquidation during the year. Of these, eight nidhis closed down owing to efflux of time and one owing to failure; the failure of other companies was generally due to the small amount of paid-up capital which prevented the companies from getting a fair start. Seventeen companies were struck off the register under section 247 of the Act. In considering the working of the Act the effect of the war on the money market and consequently on joint stock enterprise, and the extension of the co-operative movement cannot be disregarded; but, apart from the cases of the nidhis which terminated owing to efflux of time, the companies that ceased to exist or were otherwise removed from the registers were, where the concerns were not obviously institutions started solely for the enrichment of the original promotors, marked as a rule by the same features as in previous years, viz., a lack of business knowledge and of business principles both in inception and in prosecution. The gradual weeding out of undertakings doubtful in their origin or in their prospects of success was a matter of congratulation which may be placed to the credit of the present Act with its more stringent provisions, and it may be hoped that this process will of itself assist in the diffusion of a greater "business" spirit generally. The aggregate increase in the authorized, subscribed and paid-up capitals amounted to Rs. 23·99 lakhs, Rs. 44·35 lakhs and Rs. 35·64 lakhs, respectively; of the first amount banking and loan companies accounted for Rs. 22·37 lakhs. There were sixteen cases of prosecution for failure to comply with the provisions of the Act. In addition to these prosecutions, a serious case occurred in Madras—that of the Permanent Investment Saving and Lending Society—a banking company at Madras with authorized and paid-up capitals of Rs. 50,000 and Rs. 43,920 respectively. Its transactions consisted chiefly in the receipt of deposits and the lending of money on the security of jewels and immovable property. On the 30th April 1915 the secretary and treasurer reported to one of the directors that a burglary had been committed during the previous night. Jewels and promissory-notes were found missing, but the safe was intact. Suspicion fell on the secretary whose house was searched. The accounts were not satisfactory and as a result the secretary was charged and was found guilty of the offence of abetment of falsification of accounts and sentenced to five years' rigorous imprisonment and a fine of Rs. 2,000. The outstanding feature of this, the second year of the administration of the present Act, was the waning of the apprehension entertained by companies regarding difficulties in complying with its various provisions. The year was uneventful but it may be claimed that in the administration of the Act progress and consolidation were effected. Twenty-seven insurance societies were at work at the beginning of the year and 21 at its close. The further experience of the working of the Act placed beyond all doubt the conclusion arrived at in the last year that the stability of dividing societies, i.e., of societies which collect monthly premia and prescribe a certain percentage of the annual collection

Working of Companies.

Provident Insurance Societies Act, 1912.

for meeting the claims which fall due in the year, must be precarious unless they do a steadily increasing amount of business each year, an unlikely contingency. All the seven societies that ceased operations were of this class. The objects and promises of dividing societies are to outward appearance attractive especially to the poorer classes, who always welcome pecuniary aid in the shape of a lump sum and are so easily decoyed by the canvassers. The first year sees many admissions; the next years see the society living on forfeitures, since by then the cautious have started to back out: thereafter business goes from bad to worse till it is wound up. The disappearance of such societies is therefore no matter for regret. The present difficulty is to arrest their career before they have done appreciable harm.

Notaries Public. (1915-16.)

184. The reduction of the number of registering officers during the year was due to the transfer of the office of the District Registrar of Ganjām from Chatrapur to Berhampur with effect from the 1st January 1916. The operations were confined to 18 stations against 21 in 1914-15. The decline noticed last year as directly due to the financial disturbance caused by the war, continued and occurred mainly in the districts of Gōdāvari-Vizagapatam, Tanjore and South Malabar. There was an unusual increase in protested bills of exchange chiefly in the district of North Malabar (25 against nil), the inability of drawees to meet their obligations being ascribed to the continued slackness of trade and financial stringency caused by the war. Fees amounting to Rs. 533-4-0 were realized against Rs. 664-6-0 in 1914-15 and a sum of Rs. 68-1-0 was expended by the Notaries Public.

CO-OPERATIVE SOCIETIES.

(1ST JULY 1915 TO 30TH JUNE 1916.)

[*Annual Report on the working of the Co-operative Societies Act for the year 1915-16; Statistics of British India, Part II, Commercial.*]

General.

185. The general direction of progress was the further consolidation of the credit movement by investing societies with the right of shareholding; much attention was also devoted to the work of supervision. On 30th June 1916 there were 29 administrative unions of societies, with 604 societies as members, and 608 societies were shareholders in central banks. Other indications of progress were—the taking of definite steps for the formation of a Provincial Co-operative bank; the introduction of the new rules framed by Government as regards limitation of dividend, formation of reserve, and decision of disputes; and enforcement in the course of audit of the order of Government that interest due and not paid, in other words, overdue interest, should be excluded from the profits of societies. 263 societies were added to and 63 societies were erased from the register. There were 136,286 individual members in 1,769 societies (excluding 31 administrative unions and 63 liquidated societies) giving an average of 77 members to a society. The working capital of all societies rose from Rs. 140·89 lakhs to Rs. 168·89 lakhs; the paid-up share capital from Rs. 13·69 lakhs to Rs. 16·12 lakhs; loans from central banks and other societies to societies other than central banks from Rs. 51·76 lakhs to Rs. 59·47 lakhs and the reserve fund from Rs. 8·06 lakhs to Rs. 8·50 lakhs (estimated). There was a tendency for agricultural societies in towns to convert themselves into non-agricultural, and that for a reason that may not be readily suspected, namely, to secure a clientele among Government servants of all classes who under recent orders are allowed, irrespective of salary or position, to join non-agricultural societies but not agricultural societies, in which only the lower ranks of Government officials can

become members. The cost to Government of working the Act was equivalent to ·869 per cent of the working capital of the societies.

Working of societies.

Central and District Banks.

186. There were 11 central banks, to which 608 societies were affiliated, and their working capital was Rs. 70·70 lakhs. The Christian Central Co-operative Bank was a new concern intended to assist low caste Christian converts who were not able to obtain loans from central banks. Preference was given to societies mainly or largely composed of Christians, but there was nothing to preclude the grant of loans to others when funds were available. The central banks at Trichinopoly, Tenali, Tanjore and Puttur were still working with inadequate share capital, but in the three latter cases, as societies pay up instalments of share capital, the disproportion will gradually be eliminated. The proportion of uncollected balance under instalments of principal and arrears of interest was higher in the case of central banks than it had been in the previous year; the real remedy lies in increasing the supervising establishment. The loans made to individuals amounted to Rs. 1·14 lakhs and to societies Rs. 24·65 lakhs. The loans received from individuals and societies amounted to Rs. 99·27 lakhs showing an increase of nearly Rs. 18 lakhs on the previous year. The uniform rate of lending was 7½ per cent, but money could be borrowed at 6 per cent by most banks. Five banks paid a dividend of 9 per cent or more.

Agricultural societies.

187. There were 1,593 agricultural credit societies on the register on 30th June 1916. The 63 societies in South Canara district raised by way of loans and deposits from individuals over Rs. 2 lakhs, or nearly twice as much as the 258 societies in Chingleput district. The 158 societies in the rich districts of Gōdāvari, Guntūr and Kistna borrowed Rs. 3·87 lakhs from the central banks but could only raise Rs. 16,000 in local capital. The total working capital was Rs. 74·95 lakhs against Rs. 64·52 lakhs last year. The paid-up share capital was Rs. 4·53 lakhs against Rs. 4·07 lakhs, but the net profit for 1915–16 was Rs. 43,740 only against Rs. 1,42,516 last year. This serious decline was due to the exclusion of interest earned but not due, as well as of interest due but not paid; this set-back should be only temporary if societies are stimulated to greater activity in collecting arrears of interest. Of the loans due by members at the end of the previous year (Rs. 56·80 lakhs), 18·38 per cent was shown as overdue. Similarly the unpaid balance of interest overdue at the close of the year was 51·35 per cent of the total; this showed that collection work did not receive the attention that it should. It was satisfactory to note an advance in the loans for productive purposes at the expense of loans for redeeming debts and for non-productive purposes; of the Rs. 33·81 lakhs lent, Rs. 19·08 lakhs were for the first purpose and Rs. 13·93 lakhs and Rs. ·79 lakh for the latter. Loans on personal security were encouraged in societies with a good reputation, and endeavours were being made to introduce personal sureties as a collateral security even where immovable property was first accepted.

Non-agricultural societies.

188. The improvement in the number and quality of non-agricultural credit societies continued; the number of limited liability societies of a non-agricultural character increased from 77 to 97 and the number of non-agricultural unlimited liability societies from 26 to 37. The working capital of these 134 societies was Rs. 19·916 lakhs against Rs. 14·92 lakhs in the previous year. That these societies were worked more intelligently than the agricultural societies was shown by the fact that only one non-agricultural society was dissolved in the year, and their net profit was Rs. 61,372, whereas the latter societies, though ten times as numerous, earned Rs. 20,000 less profit. The secret of success lies in the prompt collection of interest month by month. 98·55 per cent of the loans due to be repaid to the non-agricultural societies were paid up; this may be favourably compared with the figure in the preceding paragraph. The working capital of all the non-agricultural societies including credit societies, purchase, sale and other societies advanced by nearly Rs. 4 lakhs to Rs. 23·24 lakhs. The provision of suitable supervision for unions was also progressing; and the proposal that primary societies should contribute

for this purpose eight annas per cent upon all borrowings as they stood on the 30th June previous (including under borrowings loans and deposits, but excluding share capital and reserve fund) was approved by Government and accepted by the agricultural societies and some non-agricultural societies.

Reserve fund.

189. The reserve funds of co-operative societies showed a small increase of Rs. 44,000 as compared with last year's figure (Rs. 8·06 lakhs) and were contributed mainly by central societies and non-agricultural credit societies ; most of the agricultural credit societies worked at a loss owing to the exclusion of accrued interest and overdue interest.

Conferences.

190. One Provincial Conference was held at Madras and six District Conferences were held at Madura, Peddāpuram, Chinnaguzulavarru near Tenali, Erode, Tiruvālūr and Masulipatam.

LOCAL BOARD ADMINISTRATION. (1915-16.)

[*Statistics of British India, Part VIII, Local Funds—Local Boards.*]

Local Boards and Union Panchayats.

District Boards.

191. The Madras Local Boards Act, 1884, as amended in 1900, continued to be in operation in all the districts of the Presidency except Madras, where the Madras City Municipal Act, 1904, was in force. The number of district boards (25) remained unchanged. Except in the Nilgiris, where the minimum number of members excluding the president was 12, each board consisted of the Collector of the district, as ex-officio member and president, and not less than 24 other members, including the officers in charge of the revenue divisions. There were at the end of the year 773 members on the district boards, which was six less than in the previous year ; the maximum strength remained unaltered. Of the members 124 were ex-officio members, 292 were nominated by Government, and the remaining 357 were elected by the taluk boards ; in 1914-15 the corresponding figures were 124, 293 and 362. Except in Koraput and the Nilgiris where there were no taluk boards, and in Gōdāvari, half the sanctioned members of each district board were elected by the taluk boards. 294 meetings were held by the district boards, 5 more than in the previous year.

Taluk Boards.

192. There were in all 96 taluk boards as in the previous year and each consisted of a president and not less than 12 other members. The boards of Ellore, Chittoor and Cuddalore continued to elect their own presidents and nineteen others had non-official presidents. The sanctioned strength of the taluk boards increased from 1,702 to 1,749 ; the actual number of members at the end of the year was 1,661, of whom 396 were officials and 1,265 non-officials. The elective system, which was introduced in July 1909 and subsequently expanded, continued in force ; of the 240 seats open to election in the year, only 63 were actually contested and only 45·9 per cent of the registered voters came to the poll. Thirty-two seats had to be filled up by presidents of district boards by nomination because no candidates were proposed. 1,246 meetings were held by the taluk boards, which was 23 less than in 1914-15.

Union Panchayats.

193. In all districts except South Canara and the Nilgiris, union panchayats assisted in the administration of local affairs in important villages. There were altogether 408 of these panchayats, or ten more than in the previous year. Each of them consisted of not less than five members, the headmen of the revenue villages wholly or partly included in the unions sitting ex-officio, and the other members being appointed by the presidents of taluk boards except in the case of 24 selected unions where the members were partly appointed by election by the tax-payers of the unions. The number of panchayatdars rose from 3,843 to 3,924, of whom 885 were village headmen, 281 other officials and the remaining 2,758 non-officials. The number of meetings held by the panchayats was 5,466 or

178 more than in the previous year. The functions of the unions were generally confined to conservancy and minor sanitary works and the construction, repair and lighting of the roads within their charges, but in some cases the management of choultries and markets was also added.

Receipts.

194. The land-cess was levied at two annas on every rupee of the land-assessment in the Nilgiris (except a portion of the South-East Wynaad, where the rate was one anna), at rates varying from two annas to one anna and three pies in Malabar, at one anna and six pies in South Canara and at one anna in the remaining districts. In Tanjore a fourth of the receipts under this head was, as usual, set apart for railway construction. In addition to land-cess, in South Arcot, South Canara, Coimbatore, Cuddapah, Guntūr, Kistna, Kurnool, Madura, Nellore, Rāmnād, Salēm, Tinnevelly and Trichinopoly, a special cess of three pies in the rupee on the annual rent value of all occupied lands was levied for the construction of railways. Tolls upon carriages, carts and animals were collected in all districts except in Guntūr and the number of toll-gates was 425 or 42 more than in the previous year. House-tax was levied in all unions, the maximum rates being in force in 336 cases, three-fourths in 62, two-thirds in one, and half rates in the remaining nine. Excluding the transactions under debt heads, the year opened with a balance of Rs. 1,80,02,219, or Rs. 87,846 less than in the previous year. The receipts fell from Rs. 1,95,35,588 to Rs. 1,78,70,534 ; excluding the receipts from the special railway cess, the revenue from rates and taxes rose by Rs. 3,44,476 owing to increases of Rs. 3,01,339, Rs. 41,327 and Rs. 1,810, respectively, under land-cess, house-tax and tolls. There was a rise under land-cess in nineteen districts, the increase being marked in Rāmnād (Rs. 90,197), Guntūr (Rs. 57,661) and Cuddapah (Rs. 45,636), but there was a marked fall in Vizagapatam (Rs. 57,131) and Nellore (Rs. 33,344). The income from tolls in South Arcot fell by nearly Rs. 48,800, but there was a noticeable rise in Ganjām (Rs. 24,565). The grants received from Provincial funds were this year curtailed by Rs. 23,08,300 and only amounted to Rs. 46,23,806, of which Rs. 16,92,726 were contributed in aid of the general resources of local boards, Rs. 5,26,300 were granted for renewals of roads and bridges, Rs. 49,647 for the maintenance of hospitals and dispensaries, Rs. 5,00,000 for minor sanitary works and Rs. 36,510 for choultries. The grants for public works were paid as usual to the District Boards of the Nilgiris (Rs. 1,00,600) and Koraput (Rs. 23,750) in consideration of the smallness of their revenues. The educational grants took the shape of lump assignments intended to enhance the boards' resources, so as to enable them to equip and maintain their own elementary schools adequately. The grants towards hospitals and dispensaries represented the Provincial share of the pay and allowances of the medical subordinates employed by local boards and half the cost of the maintenance and equipment of hospitals and dispensaries opened after March 1915 ; the grants for choultries consisted mainly of the lump payments made to local boards in lieu of the income from lands originally assigned for the maintenance of choultries by their founders and subsequently resumed by the Government.

Expenditure.

195. Excluding the charges relating to debt heads and the contributions from one district board to another, the total expenditure of the local boards fell from Rs. 1,96,26,134 to Rs. 1,95,71,121 and the year closed with a balance of Rs. 1,63,01,632.

Public works.

196. The outlay on public works fell from Rs. 97,96,371 to Rs. 95,60,952; Rs. 38,25,081 were spent on the construction of roads, bridges, schoolhouses, dispensaries, markets and other miscellaneous public improvements and the remainder on repairs to existing works. The length of new roads constructed was 201 miles ; it was 176 miles less than in the previous year, but the expenditure on this account rose from Rs. 2,73,597 to Rs. 2,85,480. 24,523 miles of roads were repaired against 24,040 in 1914-15, but the outlay thereon fell from Rs. 48,97,292 to Rs. 48,64,614. All the district boards except Koraput maintained their own engineering

establishments ; in Koraput all local fund works, in some other districts some roads running along tank and canal banks, and a few special roads and bridges were entrusted to the Public Works Department.

Education.

197. The educational institutions maintained by the local boards at the close of the year consisted of 42 sessional schools for the training of teachers, a Sanskrit College, 70 secondary and 6,511 elementary schools. In the sessional schools, 1,004 students received instruction and the attendance at the secondary and elementary schools was 326,515 boys and 75,536 girls against 317,077 boys and 73,233 girls in the previous year. Teaching grants to private institutions were disbursed directly from Provincial funds instead of through the agency of the local boards. The total expenditure incurred by local boards on educational objects was Rs. 28,65,565, towards which Rs. 3,96,395 were contributed by fees collected from pupils and Rs. 14,44,611 by Provincial funds. The net local fund outlay was thus Rs. 10,24,559, or 14·3 per cent of the total ordinary income of the local boards.

Medical institutions.

198. 125 hospitals and 276 dispensaries were in the charge of the local boards against 127 and 271, respectively, in the previous year ; the cost of maintenance declined from Rs. 9,86,186 to Rs. 9,53,172, but the number of patients treated at them rose from 4,155,414 to 4,385,177. Three hundred and twenty-six midwives were employed by local boards at a cost of Rs. 56,675 and the number of labour cases attended by the midwives rose from 24,526 to 25,577.

Vaccination.

199. The district boards employed 721 vaccinators (including probationers) against 718 in the previous year. The average cost of each successful operation increased from As. 3-5 to As. 3-6.

Sanitation.

200. The expenditure on sanitation was Rs. 16,33,430 against Rs. 13,07,324 in 1914–15 ; special attention was paid to rural water-supply.

Railways.

201. The only district boards which possessed open railways were those of Coimbatore, Tanjore, Guntūr and Kistna ; new lines were under construction in the districts of Salem and Tinnevelly, as also a further extension of the railway in Tanjore. The balance in favour of the railway guarantee fund of the Tanjore District Board at the beginning of the year was Rs. 28,55,800 in Government securities and Rs. 43,858 in cash. The gross traffic earnings increased from Rs. 9,51,392 to Rs. 10,05,282, but the working expenses declined from Rs. 6,16,562 to Rs. 5,64,027. The district board repaid Rs. 71,065 to Provincial funds towards the recoupment of the Government share in the railway, which is treated as a loan ; it paid Rs. 25,284 to debenture holders as interest and Rs. 21,520 to the sinking fund towards the liquidation of the debenture loan. The profit derived from the working of the railway was Rs. 4,41,255, or 8·1 per cent, and at the end of the year the balance in favour of the fund, after taking into account all charges (inclusive of a sum of Rs. 5,98,682 debited to the head " construction of Railways ") and receipts, was Rs. 28,55,800 in Government securities and Rs. 73,508 in cash. In view of the difficulty of selling the Government securities in hand, the Board borrowed on their pledge a sum of Rs. 2,40,000 from the Bank of Madras for the construction of its railway in the year. In Kistna the opening balance of the railway cess fund was Rs. 15,19,300 in Government securities and Rs. 1,54,820 in cash ; the gross earnings of the railway rose from Rs. 4,06,330 to Rs. 4,18,797 and the working expenses from Rs. 1,83,156 to Rs. 1,89,098. In addition, the District Board repaid a sum of Rs. 1,35,447 to Provincial funds towards the loan taken from Government for the construction of the line. The profit derived from the working of the railway was Rs. 2,29,699, or 10·4 per cent, and the closing balance in favour of the fund was Rs. 16,68,500 in Government securities and Rs. 3,04,422 in cash. A new line from Podanur to Pollachi was opened in the Coimbatore district ; the net earnings during five and a half months' working amounted to Rs. 34,178, or a return of 6·65 per cent. The new line in Guntūr from Tenali to Rēpalli was opened at the very close of the year and yielded a gross income of Rs. 3,170.

MUNICIPAL ADMINISTRATION—MUFASSAL. (1915–16.)

[*Statistics of British India, Part VIII, Local Funds—Municipalities.*]

General.

202. Two new municipalities, Peddāpuram and Narasaraopet, began actual work on 1st April 1915, and the unions of Virudupatti, Proddatūr and Dhārāpuram were constituted municipalities in the year. The Government secured the services of Mr. H. V. Lanchester, one of the Vice-Presidents of the Royal Institute of British Architects and Honorary Secretary of the Town-planning Committee of that Institute, for a period of six months to give advice upon schemes of town-extension. He delivered a course of lectures on town-planning and examined and advised local bodies and the Government upon important schemes for the relief of congestion and the formation and extension of suburbs.

Constitution of Councils.

203. The strength of the 67 Councils increased from 1,057 to 1,121 owing to the addition of four new councils ; the maximum strength of the Vāniyambādi, Tenali, Ellore, Masulipatam and Ootacamund Councils was also raised. The elective system was newly introduced into the Hospet and Tenali Municipal Councils, six and five seats, respectively, being thrown open to election, and the number of elective seats on the Vāniyambādi, Adōni, Ellore, Masulipatam and Ootacamund Municipal Councils was increased. The actual strength of the various councils was 1,019 members, of whom 86 were ex-officio, 431 nominated by Government and the remaining 502 elected by the rate-payers ; 186 members were officials and 833 non-officials against 181 and 799 in the previous year. In addition to the ten councils mentioned last year, the Councils of Tiruppattūr, Chidambaram, Adōni, Bellary, Cuddapah, Proddatūr, Peddāpuram, Narasaraopet, Tanjore and Srīrangam consisted entirely of Indian members. 1,761 meetings were held, which was 122 more than in the previous year, but 64 meetings were adjourned for want of a quorum ; the average attendance of councillors at each meeting was 59·6 per cent. The system of appointing municipal councillors by election was in force in 61 municipalities, and of these 53 towns were divided into wards for electoral purposes.

Receipts.

204. The opening balance was Rs. 45,02,533 against Rs. 40,62,639 in 1914–15 and the current receipts declined by Rs. 1,09,419 to Rs. 79,81,969, the decrease being due mainly to a fall of Rs. 3,54,415 under " advances recovered " compensated by an increase of Rs. 2,68,762 under " rates and taxes." The income realized from the tax on buildings and lands, the water and drainage tax and the tax on arts and professions amounted to Rs. 15,78,021, Rs. 7,75,115 and Rs. 2,76,939, respectively. The income from tolls and from educational institutions rose from Rs. 6,73,598 and Rs. 2,53,783 to Rs. 6,86,613 and Rs. 2,80,700 and that from markets and slaughter-houses from Rs. 3,67,623 to Rs. 3,75,228. The grants and contributions paid by Government amounted to Rs. 19,95,515 against Rs. 20,04,446 in 1914–15, and consisted of Rs. 16,98,349 paid for general purposes, Rs. 2,10,833 for education and Rs. 86,333 for medical purposes. A large increase in the grant for general purposes was due to the fact that grants made to municipal councils for water-supply and drainage schemes executed by the Government Public Works Department on behalf of municipal councils were paid to the municipal councils themselves instead of being placed at the disposal of the Public Works Department direct. Smaller grants were made for medical and educational purposes on account of the financial stringency.

Government grants.

Special grants.

Loans.

205. No loan was raised by any municipality in the open market, but loans from Government amounted to Rs. 1,36,380 against Rs. 92,470 in 1914–15. The Municipal Councils of Chidambaram, Coonoor, Kumbakōnam and Vizagapatam borrowed Rs. 24,000, Rs. 23,250, Rs. 11,250 and Rs. 2,500 severally for expenditure on schemes for the introduction of water-supply or improvements to water-works ; a sum of Rs. 14,080 was

advanced to the Municipal Council of Cochin towards the cost of a scheme for reclaiming a swamp and Rs. 5,300 to the Anakāpalle Municipal Council towards the cost of the town-survey. The Srīrangam Municipal Council borrowed Rs. 54,000 towards the cost of opening conservancy lanes and the Proddatūr Municipal Council Rs. 2,000 to enable it to start work as a municipality.

Incidence of taxation. 206. The average incidence of municipal taxation per head of the population rose from Rs. 1-9-8 to Rs. 1-10-11. The incidence was relatively high, as was natural, in the hill municipalities of Coonoor, Kodaikānal and Ootacamund being Rs. 5-4-4, Rs. 7-9-1 and Rs. 7-2-11; in the plains it ranged from Rs. 3-7-0 in Erode to As. 13-5 in Hospet.

Expenditure. 207. Expenditure amounted to Rs. 85,44,627 against Rs. 76,19,433 in 1914-15. The increase occurred chiefly under capital outlay on drainage works and under advances recoverable, owing to the fact that this year for the first time expenditure from Provincial grants for major water-supply and other schemes executed by the Public Works Department was included in the municipal accounts. The expenditure on public works amounted to Rs. 34,18,290, which was Rs. 3,03,767 more than in the previous year. Water-works of Ellore, Erode and Masulipatam, improvements and extensions to the water-works at Dindigul, Madura, Kurnool and Tirupati and drainage schemes for Madura and Vellore were under execution by the Public Works Department. Water-supply schemes for Palni, Tuticorin, Cuddalore, Chicacole, Bellary, Srīrangam, Cochin, Tiruvannāmalai, Peddāpuram, Rajahmundry, Mannārgudi, Ongole, Mangalore, Calicut, Tiruvālūr, Palghat, Parlākimedi and Walajapet, improvements to existing works at Guntūr, Conjeeveram, Tanjore, Vizagapatam, Cuddapah, Salem and Trichinopoly, drainage schemes for Negapatam, Ellore, Adōni, Trichinopoly, Chingleput, Bezwada, Cocanada, Berhampur, Rajahmundry, Calicut, Kurnool, Salem, Cuddapah, Guntūr, Cochin, Chidambaram, Nandyal, Tenali, Anakāpalle, Tanjore, Erode, Vāniyambādi, Kumbakōnam, Bellary, Mannārgudi, Periyakulam, Bimlipatam and Tinnevelly and improvements to drainage works at Ootacamund were either under investigation or preparation by the Sanitary Engineer or under the consideration of the Sanitary Board, the Chief Engineer or Government.

Public works.

Medical relief. 208. In each municipality there was at least one hospital or dispensary available to the public. The hospitals at Ootacamund and Vizagapatam remained under private management but received aid from municipal funds. The institutions in the other towns were maintained by the municipal councils themselves, a portion of their maintenance charges being generally contributed by local boards. The number of in-patients treated in these institutions rose from 40,433 to 43,498 and the out-patients rose from 2,132,568 to 2,350,394; the cost of maintenance was Rs. 6,58,451 or Rs. 14,703 more than in the previous year. There were 536 educational institutions maintained by municipal councils, which was 15 more than in 1914-15; they consisted of 3 colleges, 26 secondary schools and 507 elementary schools and the attendance at the municipal schools rose from 50,511 to 53,960. The councils also aided 357 elementary schools with teaching grants. The expenditure on conservancy was Rs. 13,08,157 and that on lighting Rs. 2,86,174, against Rs. 12.77,759 and Rs. 2,69,437 in 1914-15.

Education.

Sanitation and lighting.

Debt. 209. The public debt outstanding against the several municipalities was Rs. 30,61,232, towards the repayment of which there were sinking funds to the extent of Rs. 1,43,950.

MUNICIPAL ADMINISTRATION—CITY OF MADRAS. (1915-16.)

[*Statistics of British India, Part VIII, Local Funds—Municipalities.*]

Financial.

210. The total receipts of the Corporation including the opening balance amounted to Rs. 54,58,619 and the expenditure to Rs. 45,30,719, against Rs. 61,71,434 and Rs. 43,21,109, respectively, in 1914–15. The income from Municipal rates and taxes was Rs. 20,24,647, or Rs. 997 more than in the previous year ; the smallness of this increase was due to the general revision not having been undertaken during the year on account of adverse conditions produced by the war. The current revenues from taxes increased by Rs. 44,450. The incidence of taxation per head of the population was the same as that of 1914–15, viz., Rs. 3-14-5. The revenue derived from municipal property and powers apart from taxation was Rs. 5,26,012 or Rs. 512 more than in the previous year. This slight increase, in spite of excess occurring under almost all the minor heads of this source of revenue, was due to a fall in the income from slaughter-houses and from interest on investments. The grants and contributions from Government amounted to Rs. 7,60,957 as against Rs. 10,15,350 in 1914-15 and were made up of the usual annual contribution amounting to Rs. 40,350 and a special grant of Rs. 7,20,607 for the improvement of water-supply and drainage, acquisition of land for a washermen's settlement and improvements to Kelly's drain. The miscellaneous receipts fell from Rs. 2,14,979 to Rs. 1,96,804, the decrease occurring chiefly under payment for water used for non-domestic purposes and sale of superstructures on lands acquired by the Corporation. The debt at the close of the year was Rs. 84,81,880. The loan of Rs. 3,00,000 raised in 1885 for the construction of drains and sewers in Georgetown was repaid during the year, as well as a sum of Rs. 37,337 towards the repayment of Government instalment loans and Rs. 3,57,729 towards interest on all loans. The sinking funds at the end of the year on account of the several loans, exclusive of the Government instalment loans, amounted to Rs. 24,52,700 in Government promissory-notes and Madras Municipal debentures and Rs. 7,622 in cash.

Works.

211. The expenditure on works amounted in all to Rs. 24,99,786, or 55·2 per cent of the total expenditure, as against Rs. 22,54,769 in 1914–15. Of this sum Rs. 13,09,074 or 28·9 per cent were spent on new works, Rs. 9,80,236 or 21·6 per cent on repairs, Rs. 1,77,735 or 3·9 per cent on establishment and Rs. 32,740 or 0·7 per cent on tools and plant, etc.

Communications.

212. A sum of Rs. 31,417 was spent on new works such as acquisition of lands and buildings for widening roads and rounding off corners, and the construction of a skew bridge over the Ottari Nullah at Stephenson Road. The Spring Haven Road constructed by the Madras Port Trust was taken over by the Corporation for future maintenance. The expenditure on repairs to communications amounted to Rs. 3,89,653 against Rs. 2,10,673 in the previous year. During the year 59·30 miles of road were re-formed against 31·23 miles in 1914–15 ; 3 miles, 5 furlongs and 103 yards of unmetalled roads were metalled and 1 mile, 4 furlongs and 142 yards of roads were tar sprayed for the first time. In addition, 1 mile, 4 furlongs and 10 yards of roads were re-tarred, and a material known as "Petroleum Pitch" was experimentally tried in Band Practice and South Beach roads. This new material did not prove a success and its use was discontinued. Five culverts were extended and two bridges were repaired.

Buildings.

213. The expenditure on new works was Rs. 2,27,031 and that on repairs Rs. 27,612. Quarters for Indian nurses in the Raja Sir Ramaswami Mudaliyar Lying-in Hospital were completed and electrical installations to the hospital carried out. Sanitary and electric fittings for the Sub-Assistant Surgeons' quarters in the Royapettah Hospital were installed and two compound walls were built. The improvements designed to make the present building in Barracks Square suitable for use as an hospital for the treatment of infectious diseases were in progress.

The construction of a model paracheri in Cemetery Road was completed. Three model school buildings and the main buildings for four more schools were constructed, thus making up a total of eighteen schools in all. Buildings for three other schools were in progress and the Corporation land behind "Hope Lodge" in Vyasarpadi was selected as site for a school in the tenth division. Acquisition of the land occupied by the old Fiji Emigration Depot for a model milch cow-house was completed, but the alteration to the existing buildings was postponed. The alteration of the "B" conservancy depot in Basin Bridge Road for a cow-house was in progress. The passport office in Tiruvottiyūr High Road was altered to make it suitable for a dispensary and for offices for the Sanitary Inspector, Conservancy Overseer, Vaccinator, Medical Registrar and Plague Inspector. A new type of sanitary urinal called the "Torfeit" urinal was installed in Wall Tax Road as an experimental measure, a flush-out latrine was constructed, and the construction of seven more flush-out latrines was in progress.

Drainage. 214. The total expenditure on drainage works was Rs. 10,87,942, of which Rs. 6,78,535 related to new works and Rs. 4,09,407 to maintenance. Gravitation mains for the Napier Park and Purasawalkam areas and a storm water drainage in North Triplicane were in course of construction. A scheme for anti-malaria drainage work in the Purasawalkam area was designed and as an experiment a small portion of the scheme was carried out with successful results. The general principle of this scheme was to drain the tanks to the lowest level possible by gravitation. Detailed estimates to force the sewage into a new sewage farm three miles to the north of the City boundary were completed. The laying of deep intercepting sewers in Georgetown and the connection of houses to the newly laid sewers in Tondiarpet were in progress. The house connections to the several sewers in the City were provided with silt catchers and the result was that the admission of silt to the sewers was prevented to a great extent and the surcharging in the sewers was greatly diminished.

Water-supply. 215. The outlay on water-supply amounted to Rs. 6,31,337, of which Rs. 4,78,644 were spent on new works and Rs. 1,52,693 on maintenance. Eleven filters out of the fourteen were filled with filtering materials, leaving three to be completed and the construction of seven additional filters was postponed. Regulations and rules to prevent waste, contamination and misuse of water, and a scale of fees for connecting and testing house services were introduced on account of waste caused by leaky fittings, taps left open and the irrigation of gardens by means of pipe water. A complete waste-water meter system was designed and plans and specifications drawn up to detect the underground hidden leaks. A special staff was employed to carry out house-to-house inspection and leaky fittings in some 5,000 houses were detected. The defects were rectified by the owners. The water pressure was also reduced at certain hours of the day to control the waste. The maximum quantity of water taken during any week was about 135 million gallons, which was equivalent to 39 gallons per head per day ; this was gradually reduced to about 24 gallons per head per day during the monsoon period, after which it was gradually increased to 29 gallons per head per day. The two large mains to the north and the south of the City were completed and a number of subsidiary and street mains were laid. The total length of water pipes laid under the new scheme was 224,000 feet. Under ordinary works, 18,241 feet of old pipes were cleaned and relaid or replaced by new pipes, 4,873 feet of new mains were laid and 48 fountains, 9 valves, 17 stopcocks, 6 pumps, 1 hydrant and 91 meters were fixed. The quantity of water supplied to the City was 899,476,812 cubic feet against 606,987,108 cubic feet in the previous year.

Miscellaneous works. 216. Land was acquired for the construction of a hackney carriage stand in Harris Road and other miscellaneous works were executed.

Education. 217. The expenditure on education was Rs. 32,301 against Rs. 27,392 in 1914–15, the increase being due to the establishment of four new schools.

The total number of schools maintained by the Corporation was 16, and there were 1,931 boys and 386 girls on the rolls of these schools on 31st March 1916. There were 82 teachers in the Corporation schools, besides 4 instructors, a supervisor for drawing and kindergarten, and 2 gymnastic instructors employed for the benefit of all the elementary schools.

Sanitation and Medical services.

218. The cost of maintenance of the Corporation hospitals and dispensaries amounted to Rs. 86,902 against Rs. 82,531 in the previous year. The total number of patients treated in them was 207,431 as against 215,671 in 1914–15. The usual contribution of Rs. 20,000 to Government on account of hospitals, and contributions to other Medical institutions amounting to Rs. 5,070 were paid. The total number of cases vaccinated in the City in the calendar year 1915 was 27,229. The percentages of success in primary vaccination and re-vaccination cases were 96·31 and 56·80, respectively, as against 98·59 and 53·63 in 1914. The number of children under one year vaccinated was 16,442. The number of births and deaths registered in 1915 was 18,331 and 18,688 as against 18,241 and 24,174, respectively, in 1914. The birth and death rates were respectively 35·3 and 36·0 per mille as against 35·2 and 46·6 per mille in 1914. The City continued to enjoy immunity from plague, the amount spent on anti-plague measures in the calendar year 1915 being Rs. 26,927. A sum of Rs. 5,65,413 or 12·48 per cent of the total expenditure was spent on conservancy.

Vaccination.

Births and deaths.

Conservancy.

Anti-malarial operations.

219. A sum of Rs. 1,50,266 was spent on anti-malarial operations in 1915. The general mosquito and malaria survey was carried on, the work consisting mainly in marking down malarial zones and the breeding grounds of dangerous anophelene mosquitoes in and around these zones. Special investigations into the question of the Buckingham canal and the Cooum river acting as breeding grounds for mosquitoes were conducted and reports submitted to the Malaria Board. The usual anti-malarial measures, such as cleaning of tanks, ponds and wells, petrolizing, clearing rank vegetation, introduction of larvicidal fish and ducks, reclamation, drainage and quininization were undertaken mainly in the three known malarial zones, namely, Tondiarpet, Mylapore and Purasawalkam. There were 4·5 per mille of fever deaths including deaths from malaria in 1915, as against 6·7 per mille in 1914, or 12·5 per cent of total deaths as against 14·3 per cent in 1914. Deaths from malaria as registered worked out at 3·3 per mille as against 5·1 in 1914.

Miscellaneous.

220. A sum of Rs. 2,51,654 was spent on lighting and the cost of maintenance alone amounted to Rs. 97,156. 860 new electric lights were installed raising the total number to 1,869 ; besides these 4,672 kerosine-oil lamps and 39 power lamps were maintained. The public parks—People's Park, Napier Park, Robinson Park and Loane Square—were maintained at a cost of Rs. 36,978 against Rs. 30,774 in the previous year. The cost of maintenance of fire-engines was Rs. 12,086, and two additional motor fire-engines were purchased. The engines were requisitioned for 7 fires as against 18 in 1914–15.

MILITARY (VOLUNTEERING). (1915–16.)

221. There were 13 volunteer corps attached to the 9th (Secunderabad) division, as in the previous year. Of these nine corps had their head-quarters in the Presidency ; the other four corps were situated at Hyderabad, Bangalore, Kolar and Coorg. The number of extra-efficients was 8,179 and of efficients was 1,672. There were not as many extra-efficients as in the previous year and there were nineteen non-efficients distributed among three corps. The Madras Artillery Volunteers and the Volunteer Guards continued under mobilization, doing duty in Fort St. George. Both corps sent a number of men to the front ; of the former corps 3 officers, 1 instructor and 64 rank and file were sent on service with

the Volunteer Artillery Battery and 9 men went as despatch riders ; of the second corps 14 men went to the front as despatch riders, 34 as motor boat drivers, and 13 as hospital orderlies. 200 men of the Malabar Volunteer Rifles were called out for actual military service ; it was also necessary for each detachment to keep an armoury guard mobilized for nearly a year. Two detachments of the Madras and Southern Mahratta Railway Rifles were mobilized for guard duties at Perambur and St. Thomas' Mount. Both the Hyderabad and the Kolar Gold Field Volunteers formed a new motor cyclist section ; the latter corps disbanded their Mounted Rifle section. Four officers and 29 men of the Coorg and Mysore Rifles have joined the regular forces since war was declared.

MARINE. (1915–16.)

[*Report of the Madras Port Trust and Madras Port Department for 1915–16 ; Statistics of British India, Part VIII—Local Funds.*]

Madras Port Trust.

222. In the year under review the receipts of the Trust from all sources were Rs. 11,66,697 against Rs. 12,57,230 in 1914–15. This represents a decrease of 7·20 per cent. The gross expenditure out of revenue—not counting contributions made by revenue to capital or repayment of debt—was Rs. 10,49,066 or the equivalent of 89·92 per cent of the gross receipts. Excluding from working expenses the interest on loans, which in the year under review came to Rs. 4,56,273, actual working expenses came to 50·81 per cent of actual harbour earnings against 44·44 per cent in 1914–15. The average cost per ton of goods passed through the port by the Trust's own agency was Rs. 2·68 or, if the whole of the goods passing through be counted, including that not handled by the Trust, the average cost was Rs. 1·81. The harbour dues alone, i.e., excluding the charges for specific services such as cranage and storage, came to Rs. 7,34,070, which was equivalent to the railway freight on the same articles for about 54 miles. The average charges paid by shipping came to about 1·56 annas per net registered ton.

Works.

223. At the close of the year 1,075 feet of the north end of the west quay and 251 feet of the south end were completed, and the water opposite to the former was deepened to 28 feet below low water thus giving room for two vessels at a time to lie at the north end of the quay. The whole of the steel structure known as the export pier and the shore ends of those called the non-dutiable and dutiable import piers were dismantled to make room for pitching the well curbs of the west quay. The shed trolly lines leading on to the latter two piers were diverted over the wells already sunk, so as not to inconvenience the traffic. All the four platforms serving the four transit sheds were completed, including the foundations of booking offices at the ends of these platforms. The sides of the platforms were provided with ramps opposite each doorway of the transit sheds to facilitate the handling of railway traffic to and from the sheds. The whole work of remodelling the railway lines in the yard except the southern grid-iron sidings was completed. The new main line was finished during the year and passed for passenger traffic by the Senior Inspector of Railways in January 1916. The south wing of the new harbour office was constructed as also the three more annexes and the central tower, so completing the building. On 1st January 1916 the signal room and mast on top of the tower at the centre of the west quay came into use, the old ones on the roof of Presidency Port Office going out of use simultaneously. The whole of the iron-work and over two-thirds of the ferro-concrete floors of the first of the three double-storied merchants' warehouses had been completed before the end of the year. This warehouse measures 435 feet by 140 feet including covered platforms on either side served by both broad

and metre gauge lines. The ground floor is 18 feet and the first floor 10 feet high, while the roof is available for drying, weighing and bagging export cargo. All floors and the roof are asphalted, and hydraulic cranes are installed for lifting cargo on to the first floor and roof. The shed is divided into three compartments. Most of the ironwork for a second shed was received from the makers. The new hydraulic power-house, a granite stone-faced building, was finished except for the water tower, and the new workshops were rapidly approaching completion. The stores and minor buildings were finished, including the compound wall surrounding the new workshops yard. The miscellaneous works connected with the Beach Station replacement works outside the workshops yard were well in hand.

Trade.

224. The tonnage of imports, amounting to 382,500 tons in 1915-16, showed a further decrease below the figures for the previous year, the imports of coal in 1915–16 being just about half those of 1914–15. In addition to coal the chief falling off in comparison with the previous year was in metals, paper, railway plant, sugar, cotton manufactures, Australian timber, and mineral oils. There was an increase of 4,000 tons in timber from Burma and a decrease of 6,000 tons of Australian timber. The quantity of bar iron and steel imported was only 12,500 tons. Imports of piece-goods still showed a downward tendency and the figures for 1915–16 were less by 3,800 tons than those of 1914–15. The sugar imported was only 87 per cent of the quantity imported in the previous year. Imports of railway plant and mineral oils fell by 29,000 tons and 10,000 tons. The exports of groundnuts for the year were the highest on record being nearly 11,000 tons in excess of the previous year's shipments, which in their turn were higher than in previous years. The shipments of groundnuts to Europe were 78,000 tons and coastwise 19,000 tons. Only 6,000 tons of cotton were shipped in 1915–16 as against 8,800 tons in 1914–15. Salt, teas, hides and skins were shipped in larger quantities than in the previous years, the increase in the tonnage of these commodities being 2,000, 4,000 and 2,000 tons, respectively. The value of the private trade in foreign merchandise from foreign ports in the year under review amounted to Rs. 9,25,88,759 against Rs. 10,07,55,000 for the year 1914–15 showing a decrease of Rs. 81,66,241, and was 8·1 per cent below last year's record and 1·3 per cent above the previous ten-year average. In Indian merchandise from Indian ports the trade rose to Rs. 1,15,81,467 from Rs. 1,11,97,000 for the previous year, showing an increase of Rs. 3,84,467 or 3·4 per cent over that of the previous year and 22·9 per cent below the previous ten-year average. For Indian merchandise to foreign ports the figure for the year 1915–16 rose from Rs. 6,18,42,000 for the previous year to Rs. 8,58,89,607, and was 33·1 per cent over the ten-year average. The value of Indian merchandise to Indian ports was Rs. 95,16,217 against Rs. 1,30,71,761 for the previous year.

Minor ports.
Finance.

225. The receipts of Port, Marine and Coast Light funds were Rs. 8·53 lakhs and the expenditure was Rs. 10·57 lakhs. The closing balance consisted of Rs. 4·79 lakhs in cash and Rs. 19·49 lakhs in Government securities ; half a lakh was lost in the sale of the latter. There were fewer vessels trading between ports and this naturally affected the figures for trade and port dues. The aggregate value of the sea-borne trade declined by nearly Rs. 96 lakhs to Rs. 27·40 crores. The collection of port dues also fell to Rs. 2·23 lakhs and coast lights dues to Rs. ·90 lakh ; in 1913 the latter had been Rs. 1·55 lakhs. Tuticorin was the most important minor port with import trade valued at Rs. 177 lakhs and export trade Rs. 558 lakhs ; Cochin was next with an aggregate of trade valued at Rs. 555 lakhs ; no other port approached these figures. 547,246 passengers arrived at and sailed from the various ports, the largest passenger traffic being carried on at Dhanushkodi. Rs. 3·67 lakhs were spent on public works. The construction of dock gates at Cocanada was nearing completion, and work to the value of Rs. 6·31 lakhs in all had been done up to the end of the year on the building of two piers at Calicut which are estimated to cost Rs. 6·37 lakhs.

General.

226. A conference was held at Ootacamund in August 1915 to discuss the question of the construction of the Vizagapatam harbour. It was resolved that plans for the harbour should be prepared by the Bengal-Nagpur Railway Company who are to finance and work it. The system of distribution of meteorological information to ports and shipping was revised, and arrangements were made for the free distribution by wireless telegraphy from Madras of information regarding weather for the benefit of vessels at sea. There were thirteen wrecks and casualties to shipping, but no loss of life was reported. Two fatal boat accidents, however, occurred at Vizagapatam. In one two boats laden with passengers were capsized in a sudden squall and 27 were drowned; another boat also capsized when crossing the bar and one life was lost. Dredging operations for the maintenance of boat channels were conducted at the ports of Cocanada, Cuddalore, Negapatam and Tuticorin, and half a million tons of silt were removed by the six dredgers.

MORTALITY CAUSED BY WILD ANIMALS AND SNAKES. (1915.)

[*Report on the measures adopted for the destruction of wild animals and snakes during the year 1915; Statistics of British India, Part V, Area, Population and Public Health.*]

Human mortality.

227. 551 persons were killed by wild animals and 1,519 by snakes; the totals for the previous year were 306 and 1,520. The number of deaths from wild animals was trivial except in Ganjām and Vizagapatam; in the former district casualties from the Agency tracts were newly included and 380 deaths were returned under deaths from tigers; there were 65 deaths from this cause in Vizagapatam. Snakes were most dangerous in Tanjore; the highest figures were Tanjore 187 deaths, Trichinopoly 171, Malabar 138 and Salem 106. No other district returned more than 100 deaths.

Cattle mortality.

228. The number of cattle killed by wild animals and snakes fell from 13,319 to 12,320; the decrease was ascribed to the clearing of jungle around village outskirts and to the greater care shown by graziers. 8,130 deaths were due to panthers and cheetahs, 2,309 to tigers and 1,780 to snakes; the deaths under the first head were very numerous in South Canara (3,541) and were numerous in Malabar (1,170) and Chittoor (862).

Destruction of wild animals.

229. The rewards paid for the destruction of wild animals totalled nearly Rs. 20,000; it was noticeable that it was not necessarily the districts that suffered most from the depredation of wild animals that earned the most rewards. Rs. 23,302 were spent in clearing away rank undergrowth from the neighbourhood of villages.

MISCELLANEOUS. (1915.)

[*Report on the working of the Indian Arms and Explosives Acts, of the Poisons Act, 1904, and the return of sulphur licences in force during the year 1915.*]

Arms, explosives and sulphur.

230. The number of licences for arms was 46,553 against 47,962 in 1914 and 49,574 in 1913. The issue of licences was curtailed chiefly in the districts of Bellary (by 272), Chittoor (by 483), Guntūr (by 483) and Salem (by 268). In twelve districts more licences were issued than in the previous year. The chief point of interest is to observe how far licences under Form XVI for going armed for sport, protection and display were being modified into licences under Form XVIII for the destruction of wild animals. In 1914 the licences under the two forms were 35,799 and 10,687. In 1915 the numbers were 34,225 and 10,882. By far the greater

number of licences were for single barrelled muzzle loading guns, which, though out of date, are often of excellent workmanship. Licences were also issued for about 800 match locks and flint locks. There were 3,070 licensed revolvers in the Presidency, 835 licences being issued in Coimbatore ; the average in all districts was 118. Under the Indian Explosives Act 12,885 licences were issued ; 76 per cent of these licences were for the possession of gunpowder for blasting purposes. There was a progressive decrease in the prosecutions under the Arms and Explosives Acts and an increase in the percentage of convictions ; prosecutions were most numerous in the four conterminous districts of Tanjore, Madura, Coimbatore and Salem, the home of the Kalla community ; these districts accounted for nearly one-half of the total number of prosecutions. 268 licences were issued to dealers in sulphur, and 290 tons were sold or utilized in the year. The transactions in sulphur have decreased ; the chief reasons for this were the rise in the price of sulphur, which increased the price of fire-works, and the closing down of the mica mines in Nellore and Salem districts.

231. Under the Indian Poisons Act, 161 licences were issued ; in five districts only were more than 10 licences issued (Malabar 32, Gōdāvari 21, Tinnevelly 12, Tanjore 10, Ganjām 10). The total number of prosecutions was ten, of which four were in Madras. In no district was there any considerable number of cases of poisoning, the record being held by Coimbatore with five cases of cattle poisoning ; in nearly every case the poison employed was arsenic, but there was one case in Tinnevelly of a murder being effected by the use of powdered glass. In no case was there any clue as to the source from which the poison was obtained. **Poisons Act, 1904.**

CHAPTER IV.

PRODUCTION AND DISTRIBUTION.

AGRICULTURE. (1915-16.)

[*Reports on the working of the Agricultural and Civil Veterinary Departments, Madras Presidency, for the official year 1915–16 (G.Os. No. 2274, Revenue, dated 3rd October 1916, and No. 2208, Revenue, dated 25th September 1916); Agricultural Statistics of British India.*]

General.

232. In the general reorganization of the department the entertainment of additional European gazetted officers to enable the number of circles to be raised to seven had perforce to lie over, but the organization of the non-gazetted staff was worked out in detail and was brought into effect from 1st April 1916. The staff has now been divided into two main sections—Scientific and Agricultural. Out of 202 applications for admission into the Agricultural College, 43 were admitted, and 92 students were in residence at the end of the year. Students of the short course were for the first time given simple manual training in blacksmith's and carpenter's work. This year the standard for the diploma was rather higher and out of 18 candidates only 12 succeeded.

Research experiments.

233. No one of the agricultural stations can be said to have enjoyed ideal weather conditions ; the season was most favourable at Coimbatore and Nandyal. The south-west monsoon was late at Anakāpalle, Samalkota and Taliparamba, and the north-east monsoon at Koilpatti. At Anakāpalle and Samalkota heavy rains were received at harvest time and considerable damage was done to the paddy crop. The season was favourable at Sirvel, but the transplanted paddy suffered because water

Sugarcane.

came late in the Kurnool-Cuddapah canal. 3,894 clumps were diseased out of a total of 35,400 at Samalkota, but it was practically confined to one variety which hitherto had not suffered much from red-rot. Red Mauritius is becoming so badly diseased that it is unprofitable to cultivate. Thirteen varieties were tried in the wet lands, and one produced an acre-

Paddy.

yield of 34·6 tons of cane. A series of experiments was in progress at Coimbatore to test the best method of spacing transplanted paddy. At Samalkota experiments conducted for five years to test the relative merits of spacing single plants 4, 6 or 9 inches apart showed very little difference in total yield. Various manurial experiments for paddy were in progress at Coimbatore, Palur and Samalkota. At the last place a plot which was steadily manured with daincha actually resulted in a 50-per cent increased yield in five years. The permanent manurial experiments on dry crops gave interesting results ; 20 crops have now been taken on the experimental plots and the average results showed that so long as sufficient nitrogen was supplied the addition of potash made very little difference. Seventeen varieties of paddy were tested on the Coimbatore farm, two of which gave yields at the rate of over 4,000 lb. of grain, and 6,800 lb. of

Cotton.

straw per acre on a 15-cent plot. Selection of single plant strains was continued at Koilpatti, Hagari and Nandyal. At Koilpatti a large number of superior strains selected from the ordinary country karunganni were under observation, but selection work on Cambodia was a failure as

Dry grains.

the soil of this farm was unsuitable. The experiments on dry crops at Taliparamba were hindered by a poor season, but good yields of chillies were obtained. This year an experiment to elucidate the best time for the planting of ragi was in favour of early planting, but last year the

results were the exact contrary. The value of sweet potatoes as a fodder crop was demonstrated at Coimbatore where a small plot of 80 cents was cultivated. Guinea grass has been tested as a fodder crop against fodder cholam at Coimbatore for a number of years, and the average results were slightly in favour of the latter. The tests to compare the value of thirteen different kinds of groundnuts were continued at Palur. In the earlier years local Mauritius groundnut gave better yields than any of the other varieties, but latterly it gave, with one exception, the poorest yield. Potatoes were tried at Hagari and one variety, Up to Date, gave very satisfactory results. Tapioca was also planted successfully for the first time at Palur ; as it required little attention and irrigation, ryots who saw it have already taken to cultivating it in this neighbourhood where it was previously unknown. The only herd maintained by the department was the one at Coimbatore ; the process of selection proceeded steadily and a stud book was maintained. The dairy dealt with 108,077 lb. of milk as compared with 77,300 lb. last year. The flock at Hagari did not do so well owing to a wet season and a change of shepherds. There were sufficient animals to allow of the preliminary classification of the several types which had appeared with a view to breed pure strains eventually. A start was made last year with the poultry at Coimbatore and the stock was steadily increasing. An attempt was made to grade up local fowls by crossing them with white Leghorn cocks.

Fodder crops and grasses. Groundnut. Miscellaneous crops. Live-stock.

234. A bulletin was published giving the results of the soil survey of the delta portion of the Guntūr district and a similar survey of the neighbouring Kistna delta was also commenced. Over 4,000 analyses were made, mainly on sugarcane for the Government Sugarcane Expert, but 78 were made on behalf of cultivators.

Agricultural Chemistry.

235. Work on paddy again occupied most of the attention of the Economic Botanist and his staff. The Paddy Breeding Station at Coimbatore was opened, 14·35 acres of land being acquired. Last year's work on the inheritance of characters in paddy was continued ; the duration of crop appeared to be determined by definite hereditary characters, so that it should be possible to breed pure types of seed to suit any local period of cultivation. Definite selection work has been started at Mangalnallur on the four principal varieties of paddy grown in the Tanjore district. Work on Cambodia cotton was continued and some promising descendants of crosses between Cambodia and Spence cotton were examined. There appeared to be some possibility of obtaining a cotton with the good qualities of Cambodia which would grow as a field crop on ordinary dry land. The first part of Mr. Gamble's "Flora of the Madras Presidency" was published, representing about one-fifth of the full flora. A most useful Manual of Elementary Botany was published by the Government Lecturing Botanist.

Botany.

236. Successful work was done in fumigating with carbon bisulphide stored paddy infected with the boring beetle ; there was a severe outbreak of this pest in Chingleput, North Arcot and South Arcot in July and August and the value of fumigation was greatly appreciated. Spraying with fish-oil soap and crude-oil emulsion against the mango hopper, which was found successful last year at Salem, was done on a larger scale in the Salem and Chittoor districts this year.

Entomology.

237. A pink fungus was found to produce a disease of the leaves of the coconut palms on the West Coast and spraying with bordeaux mixture was tried against it. A fungus was found which caused the secondary leaf-fall of the *hevea* rubber tree and this was being investigated. Diseases affecting tea and coffee plants were also examined and a cure for fruit rot in chillies was discovered.

Mycology.

238. The chief aim of the work was to obtain good new seedlings of North India canes crossed with the tropical ones. One of the main difficulties of the work appeared to have been overcome in that the conditions under which canes would flower on the farm were ascertained. Over

Sugarcane breeding station.

30,000 seedlings were obtained and of these, 4,000 were selected as worthy of being grown for trial; more than a hundred crosses were attempted with varying success. Many of the seedlings originally selected for juice were weeded out, being deficient in tillering, germinating power and general vigour.

Aid to the public.

Operating against disease.

239. By operating on every palmyra tree found to be infected with disease in Gōdāvari and Kistna, the disease has now been brought under control; 710,943 trees were examined, of which 28,958 were dead and 51,000 were found to be infected. In Malabar and South Canara over 42,000 areca palms were sprayed against the mahali disease. Similarly in the Ceded districts the work against smut on cholam was vigorously pushed on, and over 17,000 acres were sown with seed treated with a solution of copper sulphate, as against 1,300 acres last year. In the Vizagapatam district about 70,000 setts of sugarcane were sold from the Anakāpalle and Samalkota farms. In South Canara the introduction of Red Mauritius cane made good progress, the area this year being 600 acres as against 424 last year. At the same time 41 iron mills, for which there was a great demand round Mangalore, were sold by the department. The continued high price of sugar gave a stimulus to the planting of cane around the sugarcane factory at Nellikuppam. Very much larger quantities of improved cotton seed were used for sowing as the result of a system of direct sale and co-operative ginning started last year. Good selected seed commanded a premium of 30 to 50 per cent at sowing time. Taking a conservative estimate, at least 27,000 acres must have been sown by selected seed in 1915 and there were 89 ryots in 29 villages who had combined for this purpose as against 63 ryots in 20 villages last year; further, the premium paid by the cotton buying firms for the improved cottons was as high as Rs. 17 a candy. Every effort was being made to dissuade the ryots from growing pulicchai cotton which was worthless in itself and was spoiling the market for Tinnevelly cotton. The demand for the surplus paddy seed of the farms continued, and altogether 67,000 lb. of seed were sold. In the Gōdāvari district, the methods of reduced seed rate for seed beds and single planting were demonstrated on 1,142 acres distributed in 92 villages. Altogether 170,515 lb. of green manure seed were sold as compared with 145,613 lb. last year and much more could have been sold in the South and Central Circles if it had been possible to procure it. A special stock of indigo seed was again laid in to meet the wants of ryots who wished to profit by the present high price of indigo and about 33,000 lb. of seed were sold, more than half being sold in Vizagapatam, where there has been a considerable revival of the industry. Ploughing demonstrations were held in the Northern Circars in connection with the District Conferences and an interest in improved ploughs was created; 5 Monsoon ploughs were sold from the Anakāpalle station and 21 in the Central Circle. The demonstration of drill cultivation by trained coolies in Tinnevelly district was the most successful method of agricultural demonstration employed. The area thus sown was 1,619 acres in 1910; it is now 17,060 acres.

Crops.

Cattle shows and Agricultural lectures

240. Cattle shows were held at Ongole, Tiruppūr and Madura. Agricultural lectures, demonstrations and exhibitions were given at all these as well as at the Mailam cattle fair in South Arcot district, the lectures at Tiruppūr being illustrated by lantern slides.

Agricultural associations.

241. The year saw the winding up of the Central Agricultural Committee, for the great expansion of the Agricultural Department since 1906 had rendered the existence of such a central committee unnecessary. The balance of funds, etc., were transferred to the newly formed Madras Provincial Co-operative Union, one of the objects of which is to promote agricultural co-operation. The old district associations and the village associations in Malabar, 26 in number, did good work. An agricultural co-operative society was formed successfully at Rettanai in South Arcot district for the co-operative purchase of seeds, manure and implements.

242. A most interesting and instructive exhibit of agricultural produce and practice was held at the Madras Exhibition in December 1915 and January 1916. There were dairy, silk-rearing and poultry-rearing sections in full working order, a sugarcane mill worked by an oil-engine and an improved jaggery furnace, well boring and pumping machinery actually at work, paddy and green manure crops growing, and demonstration of spraying of areca palms. Besides these, exhibits of cotton, sugarcane, groundnut, insect-pests and plant diseases, tea, coffee, rubber, cinchona, pepper and improved agricultural implements were shown. **Park Fair Exhibition.**

243. The total strength of the three classes in the college at the end of December 1915 was 65. Fifteen students graduated from the college during the year, the percentage of successful candidates at the final examination being 75. The examination results were not as good as usual on account of the number of changes in the teaching staff. At present the college is monopolized by the Tamil-speaking districts and the West Coast; special efforts will be made to attract Telugu students. **Civil Veterinary Department.** The Madras Veterinary College.

244. New hospitals in permanent buildings at Erode, Amalāpuram, Nellore, Hindupur and Salem, a dispensary at Nandyal and two minor dispensaries at Negapatam and Bhadrachalam were opened. Dispensaries will be opened at Madanapalle and Ootacamund as soon as buildings are available. There was a noticeable decrease in the attendance at the hospitals at Trichinopoly, Coimbatore, Pithāpuram, Bellary and Tiruvannāmalai, and an increase at Saidapet, Rajahmundry, Berhampur and Tinnevelly. Hospitals and dispensaries.

245. The provisions of the Prevention of Cruelty to Animals Act, XI of 1890, have been extended to all municipalities in which there are veterinary hospitals. Prevention of Cruelty to Animals Act.

246. The mortality among cattle was much less than in the preceding year. There was a decrease under every head, the fall being most noticeable under foot-and-mouth disease and other contagious diseases. The mortality under rinderpest, however, continued to be high, although the mobile corps worked in the Nellore and Gōdāvari districts and additional veterinary assistants were at work in Guntūr and Cuddapah. 90,693 cattle were inoculated against rinderpest, and touring veterinary inspectors and assistants treated 17,546 cases against 21,483 in 1914-15. Diseases.

247. The two Arab stallions which remained at stud in the beginning of the year covered 56 mares; they have now been sold as the results obtained from them were not satisfactory, and it has been decided to try country-bred stallions. Of the 13 breeding bulls, 1 died and 3 were sold. Breeding operations.

248. Shows were held at Ongole, Tiruppūr and Madura, and a cattle show was organized in the Cuddapah district in connection with the Industrial Exhibition at Proddatūr. Cattle fairs were held in several parts of the Presidency in addition to these shows. Cattle shows.

249. The outbreak of war led to a marked decline of industrial enterprise; English engineering firms were engaged in munitions work and although there were rice hullers, pumps and oil-engines made in India on the market, the ryots for the time being preferred to wait. Further it was no longer possible to buy on the hire-purchase system; thus it was not surprising that only 39 per cent of the applications for advice matured into orders. Of the applications dealt with, 60 were for pumping and 76 for industrial plants, the former class of enquiries coming mostly from North Arcot, Coimbatore, Tinnevelly and the Ceded Districts. On the industrial side, the bulk of the enquiries was for rice hullers, the demand for which is spreading to South Arcot, Chingleput, and Tinnevelly. A few groundnut decorticating machines and oil mills were purchased by ryots of the Gooty and Tanjore sections and enquiries for flour mills were received from Chingleput and Cuddalore districts. The departmental plant consisted of 30 hand-boring sets with two relief sets, two power drills, three exploders, and eight low speed and six high speed pumping engines. The total depth bored through was 24,750 feet as against 28,000 last year; the number of borings fell from 645 to 495, but the percentage **Pumping and Boring Department.**

of success rose from 72 to 80. The net cost of boring 100 feet has been reduced to less than half of what it was two years ago. Startling results were obtained in the Tanjore district, where sub-artesian springs are being tapped ; at Nedumkollai at 70 feet depth a spring was struck yielding a supply of 200 gallons a minute. Borings indicated the presence of a hitherto unsuspected sub-artesian basin extending southwards from the Cauvery, which should prove of inestimable value to the dry lands lying south of the delta. Another sub-artesian spring, tapped in a man's house shot 25 feet in the air, and also discharged unlimited quantities of sand, dead fish and poisonous gases until it could be plugged. The expenditure of the Boring department for the year was about Rs. 42,500 and the receipts were Rs. 25,000 ; the net expenditure was the lowest for the last five years.

WEATHER AND CROPS.

(FASLI 1325—1ST JULY 1915 TO 30TH JUNE 1916.)

[*Season and Crop Report for the agricultural year 1915–16 ; Agricultural Statistics of British India ; and Area and Yield of certain principal Crops in India.*]

Rainfall.

250. The south-west monsoon was punctual and there were good showers in the Circars, West Coast and the Hills towards the close of the month, which gave a fair start to agricultural operations in Vizagapatam, Kistna, Anantapur and Nellore. The rainfall in July was above the average except in Ganjām, Vizagapatam and Kistna ; insufficient rains delayed transplantation in Ganjām and in the uplands of Gōdāvari, and necessitated the grant of larger remissions than in the previous year. The Kurnool-Cuddapah canal breached in the month of August, but agricultural operations were not retarded, the breach having been promptly closed. The total rainfall during the monsoon was above the average in all the districts except Vizagapatam Agency, Kurnool and South Canara. In the Kistna district there were floods in some of the rivers and extensive remissions were given in two taluks, and in two taluks of Guntūr the heavy rains necessitated a second transplantation in the low-lying wet lands. The season as a whole was favourable to agricultural operations except in Chingleput and South Arcot. The area cultivated with dry first crop up to the end of September was above the normal in all the districts except Ganjām, Gōdāvari, Kistna, Guntūr, Nellore, Chingleput, South Arcot and North Arcot ; the deficiency was 32 per cent in Gōdāvari, 14 per cent in South Arcot, and between 3 and 6 per cent in the other districts. The area under wet first crop was less than the average in Gōdāvari, South Arcot and Trichinopoly districts by 21, 12 and 8 per cent respectively. The first rains of the north-east monsoon were poor in the Deccan except Kurnool, and the Carnatic, and caused some anxiety in Cuddapah and Nellore. Prospects however improved towards the close of October and there were steady rains throughout November with a copious fall towards its close. The heavy and cyclonic rains of this month breached some tanks in the Nellore district and flooded the standing crops in the low littoral tracts, but the damage was not serious. Submersion of crops by floods in Ganjām, Vizagapatam and Tanjore necessitated the grant of small remissions. The rainfall in this monsoon was above the average in all the districts except Anantapur, Chingleput, South Arcot, North Arcot, Trichinopoly and Tanjore. The favourable season led to an increase in cultivation in many of the districts, but remissions on a small scale had to be granted in Anantapur, Chingleput and Tanjore. The dry weather rains were a comparative failure, there being no showers at all in many of the districts in January and March and only a very light rainfall in February ; the hot weather rains were better and exceeded the average in the Vizagapatam Agency, Gōdāvari, Bellary, Anantapur and Madura.

Crops.

251. The area cropped was 39,175,000 acres against a normal area of 38,160,000 acres. The area under paddy was 11 million acres and exceeded last year's area by half a million acres ; in Kistna alone the extension of irrigation made an increase of 131,209 acres. 5½ million acres were planted with cholam and the increase in the acreage of this crop was due to the good rains which enabled cholam to be planted where ordinarily crops requiring less rain must be sown. In Coimbatore, however, cholam was declining in popularity as compared with cumbu and the increase in the area under the latter crop in that district was 102,000 acres. Altogether 3·5 million acres of cumbu were sown and the crop retained its position of third crop in total area. Since the cultivation of ragi is often made on land where a second paddy crop is doubtful, with a good year the area under ragi fell off in Nellore, Kurnool and some other districts ; but the area cropped was slightly above the previous year's figure. The rains in Tinnevelly, Kistna, North Arcot, Salem and Malabar, being very heavy at the beginning of the monsoon, were more suitable for the cultivation of ragi than for gingelly. Again in Cuddapah the ryots found indigo a more paying crop. The result was that only 823,000 acres were planted with gingelly. The cultivation of groundnut ceased to expand on the outbreak of war as it became increasingly difficult to ship the kernels to any profitable market ; the area in the previous year was 1,860,000 acres, but this year it was only 1,136,000 and every groundnut growing district except Nellore and Guntūr curtailed its cultivation. Sugarcane on the other hand became more and more profitable since imports of sugar were considerably curtailed, and this, coupled with the high prices fetched for jaggery, explains the increase in area from 74,500 to 94,000 acres. The extent under cotton decreased by nearly half a million acres since on all hands a fall in prices was anticipated owing to the war. For the same reason less tobacco was cultivated in some districts, especially in Guntūr and Gōdāvari. The area under indigo trebled, being 222,000 acres against 79,000 in 1914–15 ; this was due to the revival of the demand for natural dyes when the European synthetic dyes could no longer be obtained in the market.

HORTICULTURE. (1915–16.)

[*G.Os. No. 1447, Revenue, dated 26th June 1916; and No. 1999, Revenue, dated 2nd September 1916 ; Report of the Agri-Horticultural Society of Madras for 1915.*]

Government Botanical Gardens an Parks, the Nilgiris.

252. Ninety Australian apple trees in several varieties were planted in the orchard above the overseer's quarters and they were thriving. Good results were obtained from several varieties of potatoes in the second crop, and the demand for seed potatoes was greater than the supply. Some correspondence took place on the subject of establishing a seed potato farm on the Nilgiris, and the matter seemed likely to materialize in the near future. Of the seven kinds of Daffodils imported the previous year *Daffodil Bicolor Empress* gave a splendid lot of bloom from Christmas to the end of February. The collection of orchids showed a marked improvement due to better cultivation. Apples, peaches, raspberry canes as well as many bulbs and flowering plants were imported from England. Experiments continued in growing Eucalyptus plants for the Forest Department. The turf on which so much time had been spent in recent years in Sim's Park was in fair order, considering the gravelly nature of the soil and the torrential rains which frequently occurred. The orchard which is now filled with young fruit trees such as apples, plums, peaches, oranges and almonds was well cared for; it was too early to say whether any of the fruit trees planted in recent years would bear fruit in profitable quantities, but the trees planted in 1912 were growing well and were about 6 feet high. The peaches showed signs of doing the best and bore a quantity of quite good fruit. The Burliar Experimental Garde n

(2,500 feet above sea-level) was planted with some new trees. The rubber trees have not been a success, the altitude being too great. A good crop of nutmegs was obtained and 250 lb. were sent to England, but no profit resulted. The Kullar Experimental Garden, which is situated in dense forest, was fenced in, and a reservoir was also constructed to conserve the water. A fair return was obtained from the rubber trees. The coffee at Benhope continued to make only fair growth, and it was decided to cut down the forest trees which were causing it to grow poorly ; in addition a piece of ground was cleared and 48 pits were dug and revetted for the reception of more hybrids at present growing in the hot-houses at Ootacamund. The receipts in all were Rs. 6,077-3-10 and the expenditure was Rs. 27,316-5-4. There was a considerable increase in the value of plants, seeds, etc., distributed during the year.

The Agri-Horticultural Society, Madras. (1915.)

253. The income of the society from all sources, excluding the Government grant, amounted to Rs. 14,081-6-0, which was Rs. 13,805-2-4 less than in 1915. The Government grant amounted to Rs. 6,863. The large decrease was due chiefly to the termination of the contract in connection with the upkeep of gardens at the High Court, Madras Marina, the Chepauk and adjoining grounds, which were handed over to the Superintendent, Government Gardens, Madras. The expenditure was Rs. 20,901 and there was an opening balance in January 1916 of Rs. 3,499. A new kite motion pump was employed in the gardens, which fetched water from a greater depth than the old picottahs, and this materially reduced the Corporation water bill. The 76th Annual Flower Show was held on the 26th February 1916 ; heavy rain prevented it from being a financial success.

Government Cinchona Plantations.

254. The rainfall was more copious on all the plantations as compared with the previous year especially on the Dodabetta plantations. The total area under cultivation was 1,594·16 acres, of which 916·61 acres were under cinchona and 677·55 acres were under fuel. 40·13 acres at Dodabetta were uprooted and 125·96 acres of new land were planted, comprising 42·46 acres at Dodabetta, 28 acres at Neduvattam and 55·50 acres at Hooker. The total crop taken from the three plantations was 352,165 lb. made up of 302,023 lb. from Dodabetta, 48,190 lb. from Neduvattam and 1,952 lb. from Hooker.

Quinine Factory.

255. The total amount of bark worked up in the factory was 793,277 lb., comprised of 221,515 lb. of Java-grown *Cinchona Ledgeriana*, 470,905 lb. of *Cinchona officinalis*, purchased locally, and 100,857 lb. of plantation-grown *Cinchona officinalis* bark. The quinine obtained therefrom was 32,688 lb.; no cinchona febrifuge was manufactured as there was a large stock on hand. The extensions to the factory were not complete and retarded to a great extent the manufacture of quinine tablets ; this was commenced recently and a large demand from the Medical Stores, Bombay, was being met for use in field service operations. The sum spent on the upkeep of the plantations inclusive of the salaries of the officials was Rs. 59,551-3-4 as compared with Rs. 52,581-13-9 in the previous year. The increased cost was incurred owing to the higher rates for cultivation in opening out the new clearing at Hooker. The expenditure incurred in connection with the factory was Rs. 1,88,468-13-5 as compared with Rs. 1,98,755-8-6 in the previous year, but a sum of Rs. 34,985-3-6 due for bark delivered in the year could not be paid before its close. The total expenditure was Rs. 2,59,982-6-7 and the receipts covered the expenditure with a surplus of Rs. 4,24,559-13-6. The sales during the year were 49,681 lb. of quinine sulphate, 1,886¼ lb. of cinchona febrifuge, 218¾ lb. of quinine hydrochloride (inclusive of 50 lb. of acidum) and 43 lb. of amorphous cinchona alkaloids. The increase in quinine was due to abnormally large demands coming from the Medical Stores, Madras and Bombay, and to large quantities being required by the Central Provinces, Native States, and the jails at Aligarh and Rangoon, and by the Sanitary Commissioner, Nagpur, for conversion into pice packets ; the increase under febrifuge was due to larger demands from Native States and Local Fund dispensaries and to an unprecedented demand from Rajputana. The cost of a pound of manufactured quinine rose from Rs. 7-15-8

Finance.

Issue of manufactured products.

to Rs. 9-6-0, since the bark was much dearer. Sulphate of quinine was issued at Rs. 17 per pound. 2,712 lb. of quinine were sold at post offices. As a new departure, elementary schoolmasters and vaccinators were supplied with quinine for sale ; there were, however, comparatively few sales through these agencies.

FISHERIES. (1915-16.)

[*G.O. No. 2764, Revenue, dated 5th December 1916.*]

General.

256. Sir Frederick Nicholson, K.C.I.E., continued to be Honorary Director of the Fisheries Department. The main operations during the year were (1) curing, smoking and pickling fish and the manufacture of fish oils, vinegar, guano and glue at Tanur, (2) canning at Chaliyam with experiments in solar heating, (3) soap-making by the oil chemist, (4) fresh water farms at Sunkesula and Ippur, including larvicidal work, (5) Nilgiri trout culture, (6) conservancy of various waters and the detailed examination of the waters of Coorg and South Canara, (7) the Tuticorin salt-fish farm, (8) edible oyster farm at Pulicat, (9) pearl oyster culture at Pāmban, (10) *beche-de-mer* cultivation and (11) chank work over the whole coast from Madras to Cape Comorin especially in Tinnevelly and Rāmnād districts.

The West Coast stations.

257. The year was absolutely disastrous ; a year of fish famine not merely at Tanur but along the whole coast. The measure of this scarcity may be gauged by the fact that only twice, and that in November, were sardines procurable for oil and guano at Tanur, while at the cannery sardines for canning were only obtained on five occasions ; consequently there was hardly any oil and guano or fish manure on the coast, and prices for the minute quantity obtainable were out of all proportion. Mackerel were almost equally scarce ; only prawns gave fair results. There was little to record because little could be done. A new departure was made in pickling mackerel in salt, but these were too scarce for serious treatment ; the cost of mackerel, the expense of containers and the heavy railway freight made the success of the experiment doubtful. An attempt was made in pickling mackerel with vinegar and the manufacture of the vinegar had to be undertaken as English vinegar was too dear and local vinegar was useless. The result was successful. Only $2\frac{1}{4}$ tons of fish guano and a proportionate amount of oil were made during the year owing to the unprecedented famine of sardines ; the department could not even fulfil its forward orders. The two hundred and fifty private factories did hardly any work during the season. Fish frozen after the Henderson method was very successfully prepared and experimentally distributed ; fish packed in 2 or 3 inches of paddy husk travelled successfully for several hundred miles and up to 2 days in time on many occasions without a single failure, even though the parcels were unnecessarily exposed to the midday sun on open railway platforms. The necessity for protecting the inside of tins from the action of vinegar and of prawn flesh, etc., led to various experiments ; double lacquering was found fairly successful, but was troublesome and somewhat costly in fuel (kerosine) ; hence a return was made to sun heating in a "solar oven." That the department accomplished little was due entirely to the lack of fish ; orders were received even from Kashmir.

Piscicultural work.

258. This was, as usual, entirely on the fresh waters of the Presidency. At Sunkesula fish farm a large head of quick growing non-predaceous carp were maintained for stocking purposes and these were mostly turned out into the Tangadencha tank with a view to counteract the deleterious effect of the breaching of the tank the year before last ; other tanks in Bellary, Kurnool and Salem districts were also stocked. The acclimatization of tench seemed likely to be a success ultimately. The ponds in the late gunpowder factory at Vyasarpadi were handed over to this department for pisciculture purposes, and one of the ponds was set

aside for gourami, as a resting place for the consignments which were obtained from Java and Mauritius. The flesh value of these fish is exceedingly great; they are non-predaceous and live mostly on pondweed and lilies. The scheme for improving the notorious fever zone in the Nallamalais by introducing larvicidal fish in the ponds where mosquitoes breed will be put in hand hereafter. A scheme was also drawn up for utilizing the permanent waters of Red Hills and Cholavaram tanks near Madras for the eventual distribution of valuable fish to other parts of the Presidency. A small step was taken during the year in the way of fishery legislation. The conservancy of the Bhavāni and Moyar rivers in the Nilgiris was so successful that the re-stocking with live-fish food was increased and it was proposed to increase the number of fish that could be caught under a licence. The net profit—all expenses deducted—from the several chank fisheries amounted to Rs. 51,000, a revenue not hitherto approached, but the pearl fishery brought in the modest sum of Rs. 2,000 only.

Marine work.

Soap works. 259. These were in charge of the Oil Chemist. Two kinds of soap were manufactured: (1) soap compounded with fish-oil for insecticidal purposes for the use of planters and fruit-growers, (2) ordinary soap for household and personal use, which had no connection with fish-oil in any form. Soaps were made compounded with indigenous perfumes and colours and found a ready sale; they were exhibited with the other sections of the department's activities at the Madras Exhibition, and samples sent home were reported to be "too good for the price." New plant is being laid down and important experimental work is to be conducted in the next year. A paper on the use of soap as an insecticide was read by the Chemist to the United Planters' Association.

Social work. 260. On the West Coast the Assistant Director encouraged co-operative effort to improve the condition of the fisherfolk who are to a marked degree both intemperate and thriftless. Co-operative societies were established at Tanur and Tellicherry, another was in process of formation at Quilandy. At Malpi the temperance society members having accumulated Rs. 700 by abstention from drink, this money was to be utilized for co-operative purposes. The Tanur evening school continued to work at elementary education and appropriate industrial operations; in South Canara some of the fisherfolk were anxious to have a similar night school.

FORESTS.

(FASLI 1325—1ST JULY 1915 TO 30TH JUNE 1916.)

[*Annual Administration Report of the Forest Department of the Madras Presidency for the twelve months ending 30th June 1916; Statistics of British India, Part IV (b)—Finance and Revenue.*]

Area. 261. Some 20 square miles, mostly in Central Coimbatore and Anantapur, were constituted reserved forests during the year. There were also the following changes: (i) a decrease of 3 square miles caused by the rectification of boundaries in Kistna; (ii) a decrease of 42 square miles due to disafforestation of areas, which were abandoned in pursuance of the policy of giving up small scattered forests; (iii) a loss in Trichinopoly of 5 square miles of land, which were transferred to the Public Works Department; (iv) an apparent increase of 2 square miles due to excess found on resurvey of kancha areas in Nellore; and (v) a similar excess of 2 square miles discovered during forest settlement in Trichinopoly. The net result of these changes was a decrease of 26 square miles in the area of reserved forests, which thus stood at 18,849 square miles. The area of reserved lands also fell from 761 to 734 square miles. About 11 square miles were newly notified under section 4 of the Forest Act, and 20 miles were notified under section 16.

262. Forest settlement work was practically complete in the Central and Western Circles, but in the Pacchaimalai and Kollimalai hills in Salem district about 50 square miles of unreserves had yet to be dealt with. At the end of the year 567 square miles in all remained to be settled ; 492 square miles lay in the Northern Circle, where 4 blocks totalling 483 square miles remained unsettled in Gōdāvari and Ganjām districts alone. **Settlement.**

263. Of the 35,605 miles of boundaries, 1,882 miles did not require artificial demarcation ; 118 miles were newly demarcated and 33,185 miles were artificially demarcated ; at the close of the year 538 miles remained, principally in the districts of Kollegal and Madura. 17,644 miles of old boundaries were repaired against 19,433 miles in the previous year and of this 11,438 miles were cleared by subordinates free of cost. The average cost per mile of fresh demarcation rose from Rs. 33-10-6 to Rs. 36-5-3, but the cost of repairs fell from Rs. 3 6-3 to Rs. 2-11-7. **Demarcation.**

264. The Survey of India finally surveyed on the two-inch scale certain reserves in East Cuddapah, Chingleput and Chittoor, aggregating an area of about 30 square miles. The Special Forest Map Officer completed the preparation of the maps of all forest divisions ; miscellaneous work such as survey of coupes, alignment of roads and fire lines, verification of boundaries and preparation of coupe and working-plan maps was done by departmental surveyors. **Surveys.**

265. Working-plans were sanctioned for 441 square miles and plans were under preparation for 2,527 square miles. The working-plan for the sandal forests of the Javadis and another important working-plan for the fuel forests of the Madura district were sanctioned ; the Hōsūr sandal-wood working-plan was under consideration. As in the case of the Chitteris and the Javadis, the detailed enumeration of the Hōsūr sandal-wood forests showed that the value of the sandal forests had been under-estimated and that, given proper management and attention, they should be capable of yielding a much larger revenue. An interim working-plan for the forests of Goomsūr and Pondakhol and working-plans for the Nilambūr teak plantations and the Sāndūr leased forests were under preparation. There were still about 5,846 square miles of forest for which there were no working-plans, and of the existing working-plans many required revision. **Working-plans.**

266. The year's expenditure on the construction and maintenance of roads and bridges was Rs. 1,08,233 and on buildings Rs. 1,31,985 ; in the previous year the corresponding figures were Rs. 1,25,219 and Rs. 1,49,769. Owing to the war, expenditure was curtailed, and the expenditure on both communications and buildings decreased. The improvement of forest communications, however, received careful attention and 441 miles of new cart-roads were made. Under roads and bridges a greater amount was spent on repairs (Rs. 64,535) than on new works (Rs. 43,326), but under buildings the expenditure on new works (Rs. 80,720) exceeded that on repairs (Rs. 51,265). The tramway in the Tekkadi leased forest was extended, but the profit which it earned declined from Rs. 2,416 to Rs. 1,441. In Nellore the laying of tram lines for fuel transport went on as usual. **Communications and Buildings.**

267. Taking all classes of offences together, cases of injury to forests by fire, unauthorized grazing and other offences, the total was 30,885, which was 1,656 less than in the preceding year and 518 less than the average for the three preceding years. Offences appreciably decreased in the districts of Nellore, Chingleput and Trichinopoly. The number of offences in the Southern Circle was 44 per cent and in the Central Circle 32 per cent of the total, offences being most numerous in Guntūr, Nellore and in the Southern Circle, in which most of the reserved forests were small, scattered and contiguous to villages. The decrease occurred under all heads except "injury to forests by fire." In the districts of Anantapur, Chittoor, South Vellore, North and South Salem, Madura, North and Central Coimbatore, offences increased nearly 100 per cent owing to incendiarism, and in the last-named two districts owing to the exceptional dryness of the season. Cases of illicit felling and illicit grazing decreased **Protection.** Offences.

by 3·4 per cent and 13 per cent, respectively. 67·15 per cent of all cases were compounded and 24·34 per cent were taken to Court, where the percentage of acquittals to cases prosecuted fell from 7·9 to 7·2. The closure of forests to grazing as a punishment for systematic offences on a large scale was only necessary in Vizagapatam, Gōdāvari, Chittoor and Tinnevelly districts. Rewards amounting to Rs. 903 were granted to informers and forest subordinates, against Rs. 2,023 in the previous year.

Fire.

268. The system adopted in the South Kurnool division of having boundary and fire lines cleared through the agency of purchasers of material thereon was extended in the same division. In areas over which special protection was attempted the percentage of failure increased very considerably from 6·60 to 17 per cent, 1,150 out of a total of 6,763 square miles so dealt with having been burnt. The prolonged hot weather and the failure of the early rains produced unfavourable conditions; but many of the fires were attributed to deliberate incendiarism. Fires were most numerous in the districts of Upper Gōdāvari, Kurnool East and South, Cuddapah East, Bellary and North Coimbatore; the area burnt from intention or malice was twice as large as in the previous year, and increased in Ganjām, Kurnool East, Cuddapah East and West, Chittoor, South Vellore, and the Nilgiris. The cost per square mile successfully protected was Rs. 20-12-7 against Rs. 23-9-8 in the previous year. In Lower Gōdāvari the services of hillmen were used for clearing with the result that the area protected was 97 per cent of the area taken up and in South Coimbatore the services of hillmen were also enlisted; in addition to this, the ordinary staff successfully protected 8,607 square miles.

Cattle.

269. Three thousand five hundred and twelve square miles or 18 per cent of reserved forests and reserved lands were closed to cattle, sheep and goats throughout the year, and 178 square miles for some months. Only 204 square miles of reserved forests and reserved lands were open to goats against 218 square miles last year, and henceforth goats are excluded from all reserves except in portions of three reserves of the Chingleput district. In the Nellore district the Kancha system of leasing out the grazing in the forests made good progress and a Special Officer was appointed for six months to accelerate the movement. The revenue increased and, with the withdrawal of the forest subordinates, friction decreased and offences declined considerably. An important step was taken in the direction of associating the people with the Forest Department by the Forest Village System; this system recognized that the ryots of those villages, which contributed land for the formation of forest reserves, should receive preferential treatment as regards grazing and the grant of other privileges in such portions of the reserves as have been classed as "open," but in return for this they should take an active part in protecting the forests from fire and other damage. The number of animals licensed to graze on payment fell from 3,898,811 to 3,212,606, the decrease occurring in all the circles. 175,903 cattle were impounded against 208,393 in the previous year.

Natural causes.

270. Spike disease continued its attacks upon sandal in North Salem, Trichinopoly, Kollegal and North Coimbatore, and was reported to be spreading gradually; the measures taken last year to check the spread of the disease in Kollegal proved a failure. No progress was made in the eradication of lantana, which was begun last year in Tinnevelly, but attempts were being made to combat this pest in several districts in the Western Circle. Teak defoliators continued to do much damage to the teak plantations in South Malabar. The identification of the jacids on teak leaves engaged the attention of the Forest Botanist, Dehra Dun; the insect continued to damage teak and *Anoġeissus latifolia* in Nugur. Sambhur as usual did a good deal of damage in Tinnevelly.

Sylviculture.

271. Except in the Western Circle, which suffered severely from fires, the year was on the whole favourable for natural reproduction. Sandalwood was found to be more widely distributed than was supposed and in several areas it was spreading. Reproduction of *Pterocarpus santalinus* from coppice in Cuddapah and Chittoor was satisfactory. The flowering

of the bamboo was spreading over large areas in several forest divisions in the Western Circle. Natural regeneration of teak was not successful in the Western Circle owing to the absence of the light which experience shows to be essential to teak if it is to reach the pole stage. Expenditure on artificial reproduction was reduced by Rs. 6,600 to Rs. 18,973, of which Rs. 15,540 were spent on teak plantations in West Kurnool, principally to provide work for the Chenchus and divert them from crime. Operations for the improvement of the growing stock consisted of improvement fellings, thinnings, fencing, creeper cutting, the removal of inferior species, dead and dying trees, parasites and noxious growth and weeds, and the building of stone walls in a few places to protect the forests from trespass.

Experiment.

272. Successful experimental cultivation was carried out as follows:—Sandal in Kurnool South and Kistna, *Eucalyptus globulus* in East Cuddapah and Chittoor, *Swietenia Mahagoni* in Chittoor, *Pterocarpus santalinus* in North Vellore and teak in the Nilgiris and South Coimbatore. The experiment of girdling sandalwood started in South Vellore for the purpose of increasing the heartwood was still in an imperfect stage.

Exploitation.

Major produce.

273. The various methods of exploitation of major produce were clear or regeneration fellings, thinnings, selection fellings, improvement fellings and coppice fellings. Clear or regeneration fellings were carried out mostly in Ganjām, Gōdāvari Lower, Kistna, South Kurnool, South Arcot, Tinnevelly and South Malabar, and selection fellings were made in timber coupes, or where it was found necessary to eliminate dead and unsound trees. Improvement and coppice fellings were undertaken principally in fuel coupes and in a few timber coupes and bamboo areas ; in the Southern Circle this was chiefly done in sandal areas. Unregulated fellings under the permit system were made in Rampa, Lower Gōdāvari, and in some unreserves.

Minor produce.

Minor produce was generally leased out. Bamboos were removed on permits in six divisions in the Western Circle to meet the local demand for floating timber. The manufacture of catechu in North Mangalore, and the collection of miscellaneous produce in Kollegal, Kurnool East and West, parts of Nellore, the Nilgiris and South Coimbatore were carried out by departmental agency. Permits were issued in several districts for the removal of manure leaves, stones, gravel, etc. In Vizagapatam seigniorage was collected at the weekly markets from purchasers of produce collected by hillmen. Fodder grass was removed on permit in Madura, Coimbatore and in parts of the Nilgiris and South Malabar and leased out in Gōdāvari Lower and Kistna ; in Tinnevelly it was as usual included in minor produce leases. Ryots were allowed to cut and remove grass from reserves in all districts except Chingleput in the Central Circle, where there was no demand, and in North and South Vellore and South Arcot in the Southern Circle. Free removal of thatching grass was allowed in the two Mangalore divisions and parts of the Nilgiris. In Bellary 450 tons of hay were cut on contract, against 240 tons in the previous year, but no hay-making operations were undertaken by the department. The revenue from grazing and fodder grass decreased from Rs. 6,96,334 to Rs. 6,86,571, which was the inevitable result of the disafforestation of large areas of class VI reserves.

Output.

274. The output of timber was 3,933,039 cubic feet and of fuel 19,874,951 cubic feet ; the value of the bamboos removed was Rs. 3,17,489 and of minor produce, including grass and grazing, Rs. 16,22,207. The quantity of timber removed by departmental agency decreased, mainly in the Western Circle, due to smaller yields from the thinnings made in the plantations and the cessation of felling in the Tekkadi leased forests pending the transport of a large stock lying in the forests. The quantity removed by purchasers was less than in the previous year in all the circles ; in the Northern Circle and North Malabar this was due to lack of demand and elsewhere to a fall in the amount of timber realized on darkhast assignments. The quantity of fuel extracted both by departmental and private agencies decreased in all the circles except in the Southern. The value of bamboos extracted by departmental agency decreased, chiefly owing to the extension of the contract system of

working, but the value of bamboos removed by purchasers increased everywhere. The estimated value of forest produce removed by right holders decreased from Rs. 53,291 to Rs. 41,872 and of produce granted free and at reduced rate from Rs. 29,073 to Rs. 22,240.

Finance.

275. The revenue was Rs. 39·38 lakhs, showing a fall of Rs. ·79 lakh; the expenditure was Rs. 26·08 lakhs and fell by Rs. 3·29 lakhs. The net result was a surplus of Rs. 13·31 lakhs distributed over all the circles, which was the highest yet recorded; it was partly explained by the postponement of all avoidable expenditure on account of the war. A large decrease of Rs. 2·04 lakhs in the Southern Circle was accounted for by the sale in the previous year of valuable casuarina plantations in South Arcot and Tanjore, the transfer of the control of forest padugais to the Public Works Department and generally to the concentration of work on hill rather than plain forest. The expenditure under "A. Conservancy and Works" decreased by Rs. 2·92 lakhs; the expenditure of last year under this head was abnormal owing to the acquisition of the Mudumalai and Kumbarakolli forests in the Nilgiris.

General.

276. By an important change in the administration the relative position of the District Forest Officer and the Collector was modified. The District Forest Officer was declared to be the head of the Forest Department in his own district and the Conservator was made responsible for and given control over all professional, departmental and financial matters in his circle and invested with independent authority regarding the appointment, transfer, and punishment of subordinate forest officials. The Special Officer continued on duty for the purpose of accelerating the introduction of panchayats for the management of forests in which grazing was of primary importance. During the year 147 panchayats were managing 134,273 acres (nearly 210 square miles) of reserved forests and unreserved land declared reserved for the purposes of panchayat management; in the previous year there were only 76 panchayats managing about 56 square miles. The reports received showed that on the whole they worked well. The appointment of a Special Forest Officer for the Golgonda agency and the Hill Madgole in the Vizagapatam district was sanctioned and an additional forest charge was sanctioned and formed in South Canara.

Forest College, Coimbatore.

277. An event of the year was the opening of the new college buildings by His Excellency Lord Pentland; in April 1913 he had himself laid the foundation stone of these buildings. At the close of the year the third batch of students numbering 29 passed out of the college; 17 obtained Higher Standard and 5 Lower Standard certificates. The 1915–17 division started in August 1915 with 36 students, of whom 4 were withdrawn as unsuitable for the course.

MINES. (1915.)

[*Statistics of British India—Part I, Industrial—Mines.*]

Output.

278. Mining operations during the year were confined to the four districts of Vizagapatam, Nellore, Anantapur and Salem. Compared with the previous year the output of manganese was negligible. The output of magnesite in Salem was improving but it was still only 50 per cent of what was extracted in 1912 and 1913. The mining of corundum in Trichinopoly district declined to nothing. The mica mines of Nellore were very hard hit by the war; the price of mica had fallen and further no mica might be exported except to the United Kingdom. The number of local buyers were few and the mines turned out 195 tons against 464 in 1913. This general depression in the mining industry was partially counteracted by the steady increase in the gold produced in Anantapur. The last year's working showed that 23,870 oz. were brought up as against 7,269 in 1912, and in two years the output has doubled. A mining lease for iron ores was granted in the Salem district but no work has yet commenced. In Nellore some of the members of the Criminal Settlement at Kalichedu were employed in private mines.

279. The general health of the employees was good and there were no epidemics. Efforts were being made, in Anantapur especially, to improve the sanitation of the mines where the coolies were resident, but in Nellore difficulties were still felt in obtaining a good supply of drinking water. On account of the continuance of the war, labour was not dear and was easily procurable. In Anantapur neither women nor children were employed below ground, but in Vizagapatam, Nellore and Salem, both women and children were so employed. In Nellore one person was seriously injured and in Salem two ; in Anantapur six were accidentally killed and eight were seriously injured. There were no accidents in Vizagapatam.

General condition of the employees.

MANUFACTURES. (1915–16.)

[*Statistics of British India, Part I, Industrial—Factories including Industrial Labour, Cotton Mills, Jute Mills, etc.*]

280. Of the industries that dealt with manufactured products, the largest was the spinning and weaving industry. The necessary yarn for both hand-looms and power-looms was for the most part supplied by the spinning mills ; the estimated number of spindles at work was 421,272, and in the last year for which figures are available (1914-15) they consumed 128,000 bales of cotton of 400 lb. each, leaving 171,000 bales for export. There were on an estimate 400,000 hand-looms working, but excluding the mills in Pondicherry, only the Buckingham and Carnatic Mills and two small mills combined both spinning and weaving, the other mills confining themselves to spinning for the hand-looms or for export. Altogether there were nineteen cotton mills of which two in Royapuram, Madras, did not work from 1st March 1914 ; of the remainder, four mills were in Pondicherry and one in Cochin State. All the mills were worked by joint stock companies. Of the fifteen mills in Madras and the mufassal, four made cloth and eleven spun yarns, the largest number of spindles being set up at the Madura Mills where there were over 100,000. The factory at Cochin was comparatively small, having fifteen looms and employing on an average 161 hands ; its manufactures were cloths, durries, towels and bedsheets. In the four factories at Pondicherry were installed 70,122 spindles and 1,503 looms ; two factories made cotton goods and two grey and blue cloths. Three mills in the Presidency and one at Pondicherry employed a daily average of more than 3,000 hands and the daily average in all the mills was 16,328, the proportion of men to women and children being roughly 7 to 3 and 5. Next in importance to the textile industry must be reckoned the leather industry ; the export of raw hides was insignificant, as by far the bulk of the trade was in "kips" or partially finished leather. Large quantities of hides and skins are yearly purchased in other parts of India and brought to Madras to be tanned and it is noteworthy that though various efforts have been made to modernize the processes used in Indian tanneries yet tanners have always returned to the old indigenous methods. This year exports of tanned hides greatly increased ; the chief reasons were that more hides came to be tanned from North India where large stocks had accumulated when the German market was closed, and there was a brisk demand from England for war purposes and also from the United States. In 1915–16 there were five tanneries employing 50 men each daily, and three employing more than that number, the largest being the tannery at Pallavaram in Chingleput district employing 500 men. Three jute mills were at work in the Northern Circars making gunny bags and cloth ; their plant consisted of 293 looms and 6,430 spindles. In addition to these industries, there were a number of other mills engaged in different operations not coming under the provisions of the Factories Act. Apart from the rice and cotton-ginning mills which, were mainly on the East Coast, most of the manufacturing businesses were in South Canara, Malabar, Travancore and Cochin. Considering first those works which used mechanical power and employed not less than fifty hands

General.

Spinning and weaving.

Leather.

Jute mills.

daily, there were five coffee works, which in some cases also cleaned pepper; these works had a smaller turnover than usual owing to the poor crop of coffee. There were five power oil mills dealing with copra, 3 working in Travancore and 2 in Cochin, and 6 rope works. The West Coast still held a practical monopoly of the machine-made tile industry, and there were eight tile and brick-making factories working by power and one working by hand. Some of these have extended their business to undertake carpentry and engineering and three works made in addition terracotta ware and pottery. There were only two timber mills, both in Cochin State, and three rubber works. There were five cotton-ginning mills in Kurnool employing in an average 75 hands and three weaving establishments at Mangalore, which though they used power were not classed as mills. The rice mills having power plants were distributed in Ganjām, Kistna and Tanjore, there being two each in the first two districts and four in the last. This was not of course the sum total of all the rice mills in the Presidency ; for every town in a paddy area has now one or more rice hulling plants ; but as these latter employed only a small number of hands, they were not included in the statistics. Among the second class of minor industries which employed a large number of operatives but did not use machinery there were four cotton ginning works in Rāmnād, three weaving establishments in Malabar and seven rope works in Malabar and Travancore. In addition there were several engineering workshops for the maintenance of the railway stock and three cigar making factories where the Southern India tobacco was worked up with the various kinds of imported tobacco. Various new industries were also in process of development, helped for the most part with State aid. The canning of fish and themanufacture of fish oil and ordinary soaps by the Fisheries Department are dealt with in the paragraph on fisheries. The manufacture of pencils and glass, though it was still in an experimental stage, was being pushed forward by the Department of Industries. Good brown paper was produced though satisfactory white paper at a cheap price could not be manufactured. The actual production of the various factories could not be gauged except where a large bulk of the produce was for export and the figures under the sea-borne trade were available. Some mention must also be made on the manufactures turned out in the Presidency for actual war purposes. In outturn the list is probably headed by the Buckingham Mills, which turned out an enormous quantity of khaki cloth for the use of the Army Clothing Factory ; the difficulty of obtaining suitable dye hampered the work at first but subsequently the mills discovered processes which enabled them to obtain the necessary colours. Various workshops throughout the Presidency, including workshops owned by the Perambur Railway, the Kolar Goldfields Companies, the Public Works Department and the Port Trust, were also enrolled for the making of munitions ; the shell work was subsequently stopped when the Home supplies became adequate for all needs. In addition to this, the Public Works Department Workshops in Madras were engaged in supplying various needs of the Army Department ; a preliminary order of 40,000 military pattern curry combs was finished and another order for 30,000 was begun ; other contracts such as the making of parts for building bridges and draghooks for hauling guns were undertaken successfully. The Army Clothing Factory at Madras also worked at great pressure ; its monthly output in the first year of the war was 50,000 garments and in the second year 161,000 and was rapidly increasing ; the Chrome Leather Factory also was busily engaged making boots and leather articles. Thus the industrial record for the year was a good one ; the established industries continued steadily, some new industries were making progress and where the abnormal conditions arising from the war called for special goods or increased output, Government shops and private works were not found wanting.

Coffee works. Oil mills.

Bricks and tiles.

Cotton-ginning mills.

Rice mills.

Cigar factories.

Other new industries.

Manufactures for war purposes.

The Indian Factories Act. (1915.)

281. The total number of factories on the register was 417 against 391 in 1914. Twenty-one factories were not worked throughout the year. The daily average of employees was 84,419 showing an increase of 3,202

over 1914. The total number of women employed was 13,591 and the total number of children was 6,082 ; the failure of the coffee crop was responsible for the decrease in the number of women and children. The health of the operatives was satisfactory and a general improvement was noticed in the sanitation of most of the factories, though difficulty was experienced in inducing the operatives to use latrines. The highest wages were earned by men employed with machines, who earned from 4 to 6 annas more than masons or bricklayers. Industrial development did not to any extent attract labour from agriculture ; on the other hand agriculture seemed, at the time of sowing, planting and harvesting, to have attracted a considerable number of persons from factories. Fires occurred in four factories ; there was no loss of life. An interval of half an hour or more for every six hours' work was allowed in 352 factories, a system of shifts was adopted in 30 others. No children were allowed to work during the hours of night, and no women were permitted to work more than eleven hours in any one day ; generally it was less than that period. The total number of accidents during the year decreased from 392 in 1914 to 340 in 1915, of which five were fatal. Many were due to the carelessness of the person injured. The two strikes that occurred were of no importance.

The Department of Industries.

282. The year under review was an extraordinary one owing to the prevalence of a state of war and the work of the department had to be carried on in the face of difficulties of an exceptional character. The total number of plants put down was almost exactly the same as in the previous year. This might be attributed to the general rise in prices caused by the war, the high freights and the difficulty of getting delivery of orders. Generally the supply of engines and plant from England was very uncertain and firms found no difficulty in selling their limited stocks for cash, and this hit the poorer persons who were dependent on purchase by the hire system ; further during the prevalence of war conditions, ryots were somewhat chary of investing money. Towards the end of the year, however, there were signs of reviving confidence. In Coimbatore, a rich landowner placed an order for a central electric power plant to drive 18 motor pumps on 25 wells. The special feature of the year's work was the development of the compounding fees system, to overcome the principal difficulty the small machinery owner has to face—the maintenance and supervision of his plant ; the subscribers rose from 196 to 236, 25 per cent being in Tanjore district. Only three Government loans were sanctioned in the year and they were of the value of Rs. 5,400 ; during the last three years loans have gradually been falling from Rs. 52,500 to the present figure. In the department the total receipts fell slightly ; the expenditure was reduced still more, and the net cost (Rs. 2·24 lakhs) showed a reduction of 5 per cent on last year's figures. Some new machinery received from England was lent for munition work. The two peripatetic weaving parties continued their work during the year. The sugar stations at Singanallur and Hospet were a great success, and in spite of difficulties with wood and graphite, some progress was made towards the manufacture of a good Indian pencil. The manufacture of glass was hindered by the difficulty in obtaining a proper furnace of high efficiency burning oil fuel. During the year a bureau was organized to co-ordinate the work done and also to carry out investigations of a scientific character ; a considerable part of its work was in connection with confidential inquiries for Government and private parties. One of the most important events of the year was the Industrial Exhibition held in Madras in connection with the People's Park Fair at Christmas. The industrial section organized by the Department of Industries attracted a considerable amount of interest ; with the exception of the Crossley engine used for motive purposes, the whole of the machinery exhibited in the firms section was of " swedeshi " manufacture.

SEA-BORNE TRADE. (1915–16.)

[*Review of the Sea-Borne Trade of the Madras Presidency for the year 1915–16; Annual Volume of the Sea-Borne Trade and Navigation of the Madras Presidency; Statistics of British India, Part II, Commercial; Annual Statement of the Sea-Borne Trade with the British Empire and Foreign Countries; Annual Statement of the Coasting Trade and Navigation of British India; Review of the Trade of India for 1915–16.*]

General summary.

283. The aggregate value of the sea-borne trade of the Presidency was nearly Rs. 4,887 lakhs, showing an increase of Rs. 19 lakhs, or ·39 per cent, as compared with that of the preceding year. Government transactions amounted to nearly Rs. 82 lakhs, or Rs. 25 lakhs more than those of 1914–15. The depressing effect of the war upon foreign trade continued during the year but, in spite of shortage of tonnage and high rates of freight and the closure of many of the ordinary trade channels as a result of the special restrictions, which considerations of the military and public interests have imposed, the total value of the trade has exceeded that of the previous twelve months. Imports so far showed little recovery from the sudden drop which occurred at the outbreak of hostilities and consequently customs revenue has suffered considerably. Under exports the larger demand for indigo and leather, and, towards the latter part of the year, the heavier shipments of raw cotton prevented any serious fall in the export trade. The net result was that foreign trade improved from Rs. 3,500 lakhs to Rs. 3,649 lakhs, or by 4 per cent. For the gravest effect of the war on the import trade of the Presidency one would naturally expect to find evidence in the figures relating to trade with European countries other than the United Kingdom. The total value of imports from such countries was before the war Rs. 195·44 lakhs (i.e., the average for the five years ending 1913–14) ; in 1914–15, Rs. 122·16 lakhs ; in 1915–16 it was down to Rs. 75 lakhs. As much as 67 per cent of the total imports formerly came from countries which now can supply nothing, viz., Germany, Belgium and Austria-Hungary. Though the loss of trade with these three countries has reduced the total imports from Europe by 62 per cent, it is noteworthy that imports from allied and neutral countries have actually increased from Rs. 64·1 lakhs, the pre-war average, to Rs. 69·6 lakhs in 1915–16. So far as other countries are concerned, imports from Japan increased by 45 per cent over those of 1914–15 and by 182 per cent over the average for the five years ending 1913–14. The United States of America increased her supplies to Madras by 48 per cent over those in the previous year and by 60 per cent above the pre-war average. Coasting trade declined from Rs. 1,311 lakhs to Rs. 1,156 lakhs, or by 12 per cent. Under foreign trade, imports of private merchandise declined from Rs. 1,252·30 lakhs to Rs. 1,153·20 lakhs, or by 8 per cent, due to smaller receipts of cotton manufactures, railway materials, kerosene-oil, machinery, millwork and metals, while under cotton twist and yarn, gold and silver thread and cement an increase was apparent. Exports improved from Rs. 2,161·19 lakhs to Rs. 2,458·27 lakhs, or by 14 per cent. Imports of treasure declined from Rs. 18·88 lakhs to Rs. 2·87 lakhs or by 85 per cent, and exports from Rs. 67·57 lakhs to Rs. 34·56 lakhs, or by 49 per cent. Under coasting trade imports of private merchandise declined from Rs. 749·27 lakhs to Rs. 660·32 lakhs, or by 12 per cent, owing to smaller arrivals of grain and pulse, and exports from Rs. 553·78 lakhs to Rs. 490·03 lakhs, or by 11 per cent, in consequence of smaller shipments of groundnuts and coconut-oil.

Balance of trade.

284. The excess of exports over imports was Rs. 1,275 lakhs, an increase of Rs. 351 lakhs on 1914–15.

Customs revenue.

285. The total gross Customs revenue was Rs. 73·76 lakhs, a decrease from the previous year of Rs. 9·03 lakhs, or 11 per cent. The amount of import duty realized declined from Rs. 72·18 lakhs to Rs. 59·78 lakhs, or 17 per cent, resulting from smaller receipts on petroleum by Rs. 6·42 lakhs, or 38 per cent, cotton goods by Rs. 3·20 lakhs, or 29 per cent, silver bullion

or coin by Rs. 1·94 lakhs, or 84 per cent, other metals by Rs. 1·25 lakhs, or 24 per cent, spirits and liquors by Rs. ·53 lakh, or 4 per cent; there were larger receipts under manufactured articles by Rs. 1·19 lakhs, or 11 per cent. The increase of Rs. 3·37 lakhs, or 32 per cent, under export duty was the result of larger collections on rice by Rs. 3·02 lakhs, or 28 per cent, and of the new duty on tea (Rs. ·35 lakh) levied from March 1916. Prices of imported goods ruled high, especially in the case of metals, kerosene-oil, sugar and cotton twist and yarn, while grey and white piece-goods and betelnuts showed declines. Under exports there was a further decline in the case of coffee, coconut-oil, oil-cakes and all kinds of seeds, while there was a distinct improvement in the case of rice, tanned skins, pepper, tea, cotton twist and yarn and piece-goods.

286. The following table shows the relative importance of the principal foreign articles, including treasure, imported into the Madras Presidency :— **Foreign imports.**

Foreign imports.	Average for five years ending 1913-14.	1914-15.	1915-16.	Increase or decrease in 1915-16.	Percentage of total imports in 1915-16.
	RS.	RS.	RS.	RS.	
Cotton manufactures	3,07,45,056	3,19,84,673	2,29,54,757	— 90,29,916	19·91
Cotton twist and yarn	1,02,23,835	99,26,241	1,28,80,301	+ 29,54,060	11·17
Metals and ores	1,35,84,525	1,17,00,873	1,09,36,382	— 7,64,491	9·48
Railway plant and rolling-stock	73,30,056	1,00,65,314	68,51,019	— 32,14,295	5·94
Sugar	47,77,329	56,25,898	58,38,809	+ 2,12,911	5·06
Oils	48,10,039	74,67,795	57,38,602	— 17,29,193	4·98
Spices	41,32,745	45,39,613	48,19,459	+ 2,79,846	4·18
Apparel (excluding haberdashery and boots and shoes).	37,10,004	28,13,341	38,84,422	+ 10,71,081	3·37
Machinery and millwork	54,03,755	51,19,985	38,38,932	— 12,81,053	3·33
Hardware	32,39,458	29,46,058	25,14,230	— 4,31,828	2·18
Provisions and oilman's stores	22,01,931	23,61,697	24,48,970	+ 87,273	2·12
Paper and pasteboard	19,31,392	21,01,815	22,05,980	+ 1,04,165	1·91
Articles imported by post	15,59,735	15,50,701	21,71,638	+ 6,20,937	1·89
Liquors (including methylated and perfumed spirits).	16,26,334	17,54,760	18,77,588	+ 1,22,828	1·63
Building and engineering materials	9,71,612	13,06,769	18,76,712	+ 5,69,943	1·63
Motor-cars and motor-cycles	12,25,188	16,36,419	18,63,279	+ 2,26,860	1·62
Chemicals and chemical preparations	8,95,189	11,87,782	16,61,020	+ 4,73,238	1·44
Jute, raw and manufactures	8,77,854	11,22,238	13,99,359	+ 2,77,121	1·21
Soap	7,83,841	12,99,666	12,80,935	— 18,731	1·11
Instruments, apparatus, etc.	14,19,016	10,30,433	11,43,248	+ 1,12,815	0·99
Matches	11,01,259	12,57,252	11,31,008	— 1,26,244	0·98
Drugs and medicines	11,07,315	10,62,781	10,81,503	+ 18,722	0·94
Animals, living	4,56,150	8,35,447	10,60,422	+ 2,24,975	0·91
Arms and ammunition	10,75,251	11,36,729	9,83,288	— 1,53,441	0·82
Rubber, raw and manufactures	1,66,085	5,49,266	7,31,170	+ 1,81,904	0·63
Wood and timber	9,04,301	7,44,265	7,21,784	— 22,481	0·63
Stationery (excluding paper)	7,16,715	7,07,726	7,02,433	— 5,293	0·61
Haberdashery and milliuery	8,95,949	5,61,018	6,72,891	+ 1,11,873	0·58
Paints and painters' materials	5,83,197	5,43,623	6,54,869	+ 1,11,246	0·57
Books and printed matter	4,05,736	4,43,770	6,48,032	+ 2,04,262	0·56
Glass and glassware	17,26,899	8,00,561	5,10,252	— 2,90,309	0·44
Silk, raw and manufactures	4,01,879	5,15,245	4,98,851	— 16,394	0·44
Tobacco, raw and manufactures	4,81,768	4,58,448	4,50,142	— 8,306	0·39
Cycles	5,67,279	5,75,595	4,37,848	— 1,37,747	0·38
Tea chests, entire or in sections	3,21,111	3,69,929	4,22,925	+ 52,996	0·37
Leather	3,96,363	3,12,885	3,70,620	+ 57,735	0·32
Hides and skins, raw	5,84,539	2,97,663	3,57,830	+ 60,167	0·31
Fruits and vegetables	3,11,940	3,78,300	3,43,338	— 34,962	0·30
Toys and requisites for games	3,36,687	2,70,942	3,42,723	+ 71,781	0·30
Belting for machinery	3,05,643	3,00,567	3,09,186	+ 8,619	0·27
Dyeing and tanning substances	14,49,088	7,30,691	2,88,634	— 4,42,057	0·25
Wool, raw and manufactures	6,80,075	4,48,107	2,85,213	— 1,62,894	0·25
Earthenware and porcelain	3,43,283	2,89,330	2,62,517	— 26,813	0·23
Gums and resins	2,48,891	2,07,268	2,52,940	+ 45,672	0·22
Coal, coke and patent fuel	4,26,846	88,897	2,31,297	+ 1,42,400	0·20
Candles	2,86,088	2,65,370	1,79,341	— 86,029	0·16
Furniture and cabinetware	2,37,352	1,57,081	1,75,648	+ 18,567	0·15
Boots and shoes	1,91,606	1,98,311	1,72,655	— 25,656	0·15
Printing and lithographing materials	2,22,276	2,78,071	1,60,621	— 1,17,450	0·14
Manures	3,36,067	1,51,841	1,33,282	— 18,559	0·12
Jewellery and plate of gold and silver	3,55,832	1,40,846	1,07,829	— 33,017	0·10
Other articles	32,99,351	26,10,212	24,53,648	— 1,56,564	2·13
Total, Merchandise	12,23,71,697	12,52,30,108	11,53,20,382	— 99,09,726	100·00
Treasure—					
Gold	38,30,362	95,333	437	— 94,896	...
Silver	18,48,769	17,92,600	2,86,799	— 15,05,801	...
Total, Treasure	56,79,131	18,87,933	2,87,236	— 16,00,697	
Total, Foreign Imports	12,80,50,828	12,71,18,041	11,56,07,618	—1,15,10,423	...

The second year of war has brought down the figures for 1915–16 by nearly one crore, or 8 per cent, and by Rs. 70·5 lakhs, or 6 per cent, compared with the pre-war average.

FOOD, DRINK AND TOBACCO.

287. The total value under this head increased from Rs. 151·36 lakhs to Rs. 157·99 lakhs. The total imports of liquors fell by 19 per cent in quantity but the value rose by 6 per cent; Denmark, Sweden and Japan sent 2,022, 1,620 and 827 gallons of beer, respectively, although before the war they did not send any to Madras. Holland increased her consignments fourfold. There was a recovery in the imports of spirits, which rose by 11 per cent in quantity and 16 per cent in value, and exceeded the average for the five years previous to the war. This increase was chiefly caused by much larger consignments of brandy arriving from France. The only consignments of German liquors were those landed from prize vessels. In spite of the war larger supplies of port wine were received from the United Kingdom.

Liquors.

Provisions and oilman's stores.

Imports under provisions totalled Rs. 24·49 lakhs compared with Rs. 23·62 lakhs in 1914–15. There was a fall from Rs. 2·46 lakhs to Rs. 2·19 lakhs in the imports of canned and bottled provisions. Germany formerly supplied condensed milk to an average value of Rs. 17,000.

Spices.

Imports of spices improved from Rs. 45·40 lakhs to Rs. 48·19 lakhs and betelnuts, as usual, formed the bulk of the imports, consignments from the Straits Settlements being larger than usual.

Sugar.

Although the imports of sugar of all kinds fell by 24 per cent in volume, yet the value rose by 4 per cent. Refined sugar declined by 26 per cent in quantity and 4 per cent in value. The substitution of cane sugar for beet sugar in the United Kingdom, to which attention was drawn last year, continued during the year under review and a large percentage of the Java and Mauritius crops was sent Home to England. Imports to this Presidency from Java declined by 11 per cent in quantity, but owing to the high prices which prevailed throughout the year the value rose by 7 per cent. The local price of Java white, which was Rs. 32–4–0 per bag of 2 cwt. in April 1915, had risen to Rs. 39 in June, but when the new crop came in sight at the end of August the price declined to Rs. 32 and after some further fluctuations stood at Rs. 35 in March 1916. Imports from Mauritius declined by 70 per cent owing to the Home Government's purchases. A consignment of sugar arrived for the first time from Egypt. Imports of unrefined sugar increased by 415 per cent; for although Java supplies dropped from about 20,000 cwt. to 1,000 cwt., yet imports from Mauritius, which had ceased altogether in 1914–15, amounted this year to over 102,000 cwt. and consisted chiefly of syrup sugar supplied to the Nellikuppam factory for refinement.

Tobacco.

There has been a great decrease in the tobacco imported since the war began, yet the values of all varieties have shown a considerable increase. Imports of raw tobacco advanced by 28 per cent in quantity and 45 per cent in value. In normal times 11,307 lb. of raw tobacco came from Germany. Imports of cigarettes further declined by 17 per cent in quantity and 15 per cent in value. No cigarettes have been imported direct from America for the past five years. There were no imports of Egyptian cigarettes.

RAW MATERIALS AND PRODUCE.

288. Imports under this head advanced to Rs. 2·31 lakhs from Rs. ·89 lakh in the previous year. Only 12 tons of foreign coal were imported during the year and this came from Ceylon, whereas 1,078 tons were imported in 1914–15 and the average for the previous five years was 12,924 tons. There was a rise in the import of patent fuel; 6,896 tons were imported from the United Kingdom as against 230 tons in 1914–15.

Coal, coke and patent fuel.

Oils.

Imports of mineral oils declined by 31 per cent in quantity and 23 per cent in value, but both the quantities and the values of different kinds were considerably above the average for the five years previous to the war. $10\frac{3}{4}$ million gallons of oil were imported as against $16\frac{1}{2}$ millions in 1914–15 and the average value per gallon rose from As. 6–5 to As. 7–4; the Straits Settlements, Borneo and the United States all sent reduced amounts, the decrease being ascribed to the requisition of several tank

steamers by Government. There have been no imports of foreign petrol for the past three years. Imports of raw silk, mostly from China, decreased. There were no imports of American cotton, whereas the average imports before the war amounted to Rs. 2·78 lakhs. Imports of jarrah wood from Western Australia were considerably in excess of normal, and improved from Rs. 1·37 lakhs to Rs. 2·02 lakhs, but imports of teak-wood were much below normal. Other timber, consisting chiefly of palmyra rafters from Ceylon, advanced from Rs. 1·76 lakhs to Rs. 2·12 lakhs, but was only half the quantity usually imported.

Textile materials.

Wood and timber.

289. The total value of the imports under this head declined from Rs. 982·23 lakhs to Rs. 884·39 lakhs. The value of the imports of apparel improved, due to the resumption of the import trade in gold and silver thread from France; practically the whole of this thread comes from Lyons and is largely used in Southern India in the manufacture of saris, etc. 454 motor-cars were imported compared with 318 in the previous year and the vogue of the American cheap car was evident from the fact that 341 cars were imported as against 101 in 1915; the average value of the cars however increased by Rs. 360 to Rs. 2,565. The number of motor-cycles declined from 312 to 279, of which 262 were of British manufacture. Imports of cycles and accessories again declined. Under drugs and medicines the quantity of camphor imported showed a slight increase but its value decreased. Japanese camphor has now almost entirely ousted the Chinese and synthetic varieties from the market. Owing to the complete cessation of trade from Germany, Austria-Hungary and Belgium, less hardware of all kinds was imported. The United Kingdom secured 75 per cent of the trade, against 72 per cent in the previous year, and the United States 10 per cent. An increase in the number of electrical appliances brought the value of the imports of instruments and apparatus from Rs. 10·30 lakhs to Rs. 11·43 lakhs. It is hardly necessary to draw attention to the serious effect of the war on the imports of dyes. The difficulty of finding new sources of supply in place of Germany has been met to some extent in this Presidency by the increased cultivation of natural indigo. Nevertheless the great demand and high prices in England have caused most of this natural indigo to be exported. Imports of alizarine dyes were valued at Rs. 1·23 lakhs against Rs. 3·69 lakhs in 1914–15, all of which came in prize vessels either from Belgium or from Germany. The great demand for the small supplies available has raised the price per pound to unprecedented figures; thus for alizarine the average price prior to the war was As. 9, but in 1915–16 it reached Rs. 3–15–0, and in October Rs. 7. Imports of aniline dyes amounted to 11,355 lb. valued at Rs. ·43 lakh against 141,752 lb. valued at Rs. 1·11 lakhs in 1914–15. 4,034 lb. came from Germany, 3,422 lb. from Belgium and 3,008 from the United Kingdom, the figures for the previous year being 106,900 lb., 29,218 lb., and 5,506 lb., while the pre-war average was 283,000, 57,020 and 5,400 lb., respectively. The average price of aniline per pound for the five years ending 1913-14 was As. 12 but in the year under review it rose to Rs. 3–12–0. Imports of synthetic indigo, also from prize vessels, amounted to 56 cwt. compared with 503 cwt. in 1914–15. The bulk of India's supply of glass and earthenware formerly came from enemy countries; of glassware Austria-Hungary contributed 55 per cent, Germany 15 per cent and Belgium 13 per cent, while the United Kingdom sent 11 per cent and Japan only 1 per cent. The war has reversed this state of affairs and now Japan is competing with the United Kingdom for the trade, 33 per cent coming from the former country and 43 per cent from the latter. Imports of machinery declined by Rs. 12·73 lakhs, or 23 per cent and the United Kingdom supplied 90 per cent. In 1914–15 large quantities of textile machinery were imported for the extension of cotton mills at Madura but further importations for this purpose ceased soon after the war broke out. In spite of increased supplies from the United Kingdom and abnormal shipments

MANUFACTURES.

Apparel.

Carriages, including cycles and motor-cars.

Chemicals, drugs and medicines.

Cutlery, hardware, implements and instruments.

Dyes and colours.

Glassware and earthenware.

Machinery.

Iron and steel.

from the United States of America the stoppage of all supplies from Belgium and Germany has brought about a further decline of 5 per cent in the volume of the iron and steel trade. Scarcity of labour, the high price of raw material and the shortage of tonnage combined to raise prices to unprecedented levels. The average local value of iron for the five years ending 1913–14 was Rs. 140, in 1914–15 Rs. 170 and in 1915–16 Rs. 220 per ton. Previous to the war imports from the United Kingdom and from Belgium were about equal and together accounted for 85 per cent; in 1914–15 these two countries again supplied 88 per cent but with this difference that the United Kingdom's share was 66 per cent and Belgium's 22 per cent. In 1915–16 imports from Belgium practically ceased and the United Kingdom increased her share to 70 per cent; meanwhile America had captured 22 per cent. The increase of 2,289 tons under nails, screws, etc., was due to heavy imports coming from the United States of America

Other metals.

for the first time. The monopoly of copper for the manufacture of munitions, to the exclusion of commercial requirements both in Europe and America, reduced the imports by 72 per cent in volume and 68 per cent in value. The price in England of standard copper rose from £67 in January 1915 to £87 in the middle of June and stood at £100 at the end of the official year. The trade in aluminium was subjected to strict regulation by the Home Government and supplies were very scarce; imports therefore receded by 36 per cent in quantity and 29 per cent in

Railway plant and rolling-stock.

value. The imports under railway plant had a set-back by Rs. 32·14 lakhs, or 32 per cent, to Rs. 68·51 lakhs. There was a considerable increase of rolling-stock, most of which was intended for use on the Mysore State Railway, but fewer rails and chairs were imported and, of the total, 95 per cent came from the United Kingdom. The imports of cotton goods representing 31 per cent of the total foreign imports,

Yarns and textile fabrics.

Cotton goods.

declined by 14 per cent. The year again opened with large stocks which, especially in the case of grey and white piece-goods, had been bought at high rates. The holders of goods in Madras preferred to sell slowly and thereby keep the local prices from falling rather than unload their old stock and buy afresh at the lower rate prevailing at Home. Merchants were unwilling to risk fresh business on a large scale and thus business was mostly of a hand-to-mouth character and no large contracts for forward shipment were entered into. Towards the end of the year prices at Home advanced considerably and further interfered with free buying. Production was affected by the requisition of both labour and machinery for Government contracts, and further dislocation and delay was caused by the lack of dyestuffs for coloured goods. Imports of cotton twist and yarn improved by 19 per cent in quantity and 30 per cent in value. Mule yarn declined by 18 per cent in quantity, but coloured yarn advanced by 51 per cent; the decline under mule yarn was due to the high rates prevailing in Manchester which enabled Indian mills to compete more effectively. These yarns consisted mainly of counts 26 to 40, which were generally dyed locally before being sold to weavers, and owing to the great scarcity of dyeing substances much larger quantities of coloured yarns of all counts were imported. The imports of other descriptions of yarn advanced by 24 per cent. The trade in cotton piece-goods was almost entirely confined to the

Other minor items.

United Kingdom, only 1 per cent coming from other sources. Imports of arms, ammunition and military stores declined from Rs. 11·37 lakhs to Rs. 9·83 lakhs as fewer shipments of explosives were received. Imports of cement, mainly for the Madras Port Trust, rose from Rs. 8·86 lakhs to Rs. 16·04 lakhs, of which the United Kingdom contributed Rs. 14·15 lakhs' worth and Japan Rs. ·53 lakh's worth. The total import of safety matches rose from Rs. 5·08 lakhs to Rs. 6·13 lakhs, the Japanese pushing the sale of cheap goods in this as in other directions. Other matches declined from Rs. 7·49 lakhs to Rs. 5·18 lakhs as a result of smaller imports from Sweden.

290. The following table gives the value and comparative importance of the principal articles of Indian produce and manufacture, including treasure, exported from the Madras Presidency, to foreign countries :—

Foreign exports.	Average for five years ending 1913–14.	1914–15.	1915–16.	Increase or decrease in 1915–16.	Percentage of total exports in 1915–16.
	RS.	RS.	RS.	RS.	
Leather	3,51,38,365	3,70,36,147	4,49,72,985	+ 79,36,838	18·46
Grain and pulse	1,76,54,496	2,87,78,744	4,05,97,512	+ 1,18,18,768	16·66
Seeds	4,12,36,205	3,29,72,715	2,86,62,155	— 43,10,560	11·76
Cotton, raw	3,67,81,526	2,26,73,126	1,74,09,658	— 52,63,468	7·14
Tea	1,28,87,534	1,45,14,170	1,73,76,053	+ 28,61,883	7·13
Cotton manufactures	92,46,613	85,25,512	1,24,54,434	+ 39,28,922	5·11
Dyeing and tanning substances	12,81,838	19,61,300	1,16,68,650	+ 97,07,350	4·79
Rubber, raw and manufactures	27,68,263	73,02,582	96,41,286	+ 23,38,704	3·96
Coffee	1,35,42,728	1,57,95,736	92,42,013	— 65,53,723	3·79
Coir, raw and manufactures	79,29,913	56,76,920	63,70,660	+ 6,93,740	2·61
Spices	56,42,458	60,86,623	59,58,274	— 1,28,349	2·45
Oils	42,30,455	49,14,535	53,67,618	+ 4,53,083	2·19
Oil-cakes	50,43,997	42,19,365	51,51,367	+ 9,32,002	2·11
Articles exported by post	27,64,930	33,03,207	40,38,667	+ 7,35,460	1·66
Fruits and vegetables	25,31,919	30,00,844	33,28,292	+ 3,27,448	1·37
Hides and skins, raw	44,29,419	17,48,628	26,72,416	+ 9,23,788	1·10
Cotton twist and yarn	28,15,088	16,58,410	25,86,199	+ 9,27,789	1·06
Fish (excluding canned fish)	23,57,636	19,03,524	23,26,243	+ 4,22,719	0·95
Fibre for brushes and brooms	11,38,593	15,49,632	17,27,545	+ 1,77,913	0·71
Animals, living	22,96,200	17,06,054	15,86,238	— 1,19,816	0·65
Wood and timber	18,16,258	7,28,763	14,35,018	+ 7,06,255	0·59
Drugs and medicines	8,52,855	6,29,994	12,69,288	+ 6,39,294	0·52
Jute, raw and manufactures	22,16,267	14,28,803	12,69,163	— 1,59,640	0·52
Tobacco, raw and manufactures	8,72,902	9,47,281	8,64,257	— 83,024	0·36
Manures	14,59,868	8,28,468	8,05,201	— 23,267	0·33
Provisions and oilman's stores	7,36,303	6,42,299	7,91,705	+ 1,49,406	0·33
Hemp, raw and manufactures	6,57,915	7,15,968	7,86,098	+ 70,130	0·32
Sugar	11,86,020	5,76,534	5,16,548	— 59,986	0·21
Building and engineering materials	2,25,612	3,73,827	3,77,517	+ 3,691	0·16
Mica	5,34,309	4,71,926	3,75,116	— 96,810	0·15
Wool, raw and manufactures	4,05,435	2,70,337	3,61,890	+ 91,554	0·15
Silk, raw and manufactures	3,37,932	1,48,127	3,26,489	+ 1,78,362	0·13
Fodder, bran and pollard	3,01,293	1,70,308	1,27,959	— 42,349	0·05
Metals and ores	4,30,788	1,10,042	37,134	— 72,908	0·02
Horn and hornmeal	3,07,731	1,42,954	25,870	— 1,17,084	0·01
Other articles	18,53,627	10,91,162	11,61,072	+ 69,910	0·49
Total, Merchandise	22,59,13,291	21,46,04,567	24,36,68,590	+ 2,90,64,023	100·00
Treasure—					
Gold	5,09,565	23,62,915	2,32,863	— 21,30,052	..
Silver	59,12,071	43,93,842	32,23,289	— 11,70,553	...
Total	64,21,636	67,56,757	34,56,152	— 33,00,605	...
Total, Exports	23,23,34,927	22,13,61,324	24,71,24,742	+ 2,57,63,418	...

The disturbing effects of the war have not been felt so severely on the export side as in the case of imports and there was, indeed, an increase of 14 per cent over last year's figures and 7 per cent over the average exports for the five years ending 1913–14. A revival of the cultivation of indigo, a steady demand for the partly tanned Madras kips and, latterly, the large quantities of raw cotton which have been shipped have enabled the export trade to hold its own. The difficulty of finding new markets to replace those of enemy countries was met to some extent by exploiting the United States, and large quantities of tanned and raw skins, coconut-oil and pepper have been shipped direct to America and the value of the exports more than doubled ; they were, in fact, 84 per cent greater than the average for the five years immediately preceding the war. The most remarkable improvement, however, occurred in the volume of exports to the United Kingdom. The increase of 8 per cent in 1914–15 improved to 28 per cent and was actually 48 per cent greater than the average for the five years ending 1913–14. So far as allied and neutral countries in Europe are concerned it is impossible to generalise, for if exports to France, Holland and Russia have decreased, those to Italy, Spain and Switzerland have increased and secured a net improvement over last five years' figures for the Continent as a whole. Compared however with the average for the five years before the war, the fall in exports to allied and neutral countries was

more marked. The whole volume of export trade with the Continent for 1915–16 was barely equal to that with the three countries now in enemy occupation in the years previous to the war. Contrary to general expectations exports to Japan were somewhat less than those of 1914–15, and 46 per cent less than the average for the five years ending 1913–14.

FOOD, DRINK AND TOBACCO.

Grain, pulse and flour.

291. The exports of grain and pulse increased by 29 per cent in quantity and 42 per cent in value. Exports of paddy rose by 1 per cent in quantity and rice by 30 per cent in quantity, shipments of rice to Ceylon representing 90 per cent of the total exports under this head. This large increase, following on the considerable improvements in exports in 1914–15, again testified to the abundance of the rice harvest in this Presidency and to the substitution of Madras rice to make up the shortages in the Ceylon market caused by smaller supplies from Bengal and Burma to that colony. The average value of rice rose from Rs. 7-9-1 to Rs. 8-3-9 per cwt. Exports of spices contracted by 5 per cent in volume and 2 per cent in value, chillies alone showing an improvement. More than 90 per cent of the total pepper shipped was exported in the first quarter of the year and belonged to the excellent crop of 1914. The 1915 crop was poor, and, in spite of the high prices prevailing shipments from July 1915 to the end of March 1916 amounted to only one-eighth of those in this period of the previous year. The restrictions placed on the export of pepper in February last further curtailed shipments and the final figures for the year, which opened so promisingly, were below those of 1914–15. There was a brisk demand from the United Kingdom and the United States of America, due, it is said, to the large requirements for preserving meat for the armies.

Spices.

Sugar.

Exports of sugar consisted mostly of unrefined sugar and amounted to 60,897 cwt. valued at Rs. 5·17 lakhs against 87,732 cwt. valued at Rs. 5·77 lakhs, a decrease of 31 per cent in quantity and 10 per cent in value. The area under sugarcane cultivation was 16 per cent more than in the previous year, but the estimated outturn showed a decrease of 10,000 tons or 6 per cent.

Tea.

The exports of tea amounted to 25·84 million pounds against 22 million pounds in 1914–15, an increase of 17 per cent in quantity. The share of the United Kingdom rose from 60 to 82 per cent, an increase which is attributed to the prosperity of the working classes in England and to the Home Government's restrictions on the sale of liquors.

Coffee.

The coffee crops of 1914–15 and 1915–16 were only moderate and, as prices on the Continent were low and freights were high, exports were reduced by 40 per cent.

Tobacco.

The United Kingdom's share rose from 33 to 48 per cent while that of France declined from 48 to 24 per cent. Exports of tobacco dropped slightly from 3·26 to 3·03 million pounds in quantity. As usual the principal consumers were the Straits Settlements and the Federated Malay States, to which exports to the value of Rs. 3·20 lakhs and Rs. ·99 lakh, respectively, were sent. Shipment of cigars, 88 per cent of which went to the Straits Settlements and the Federated Malay States, further declined from 887,165 lb. to 748,908 lb.

RAW MATERIALS.

Hides and skins, raw.

292. Exports of raw hides from the Madras Presidency are comparatively unimportant and there was a decline of 36 per cent in quantity ; two-thirds of the total went to France and one-third to Ceylon. Raw skins (98 per cent of which were goat skins) advanced by 58 per cent in weight and 53 per cent in value. Prior to the war the United States' share was on an average 41 per cent ; it reached 53 per cent in 1915–16. With the exception of Germany, the shares of other countries have not altered much.

Oils.

With an increase of Rs. 4·53 lakhs the exports of oils totalled Rs 53·68 lakhs. Under vegetable oils, exports of coconut-oil, representing 72 per cent of all oils, advanced from 1·78 million gallons to 2·02 million gallons ; the average value fell from Rs. 2 to Rs. 1-14-0 per gallon. The increase is attributed to the large contracts for supplying the British and French Governments with glycerine which is manufactured from this oil.

Seeds.

Seeds, including copra, represented 12 per cent of the total exports of Indian produce ; there was an improvement of 10 per cent in quantity, but the value decreased by 13 per cent.

Groundnuts.

Exports of groundnuts rose by 31 per cent in quantity, but the area cropped was 23 per

cent below that of the previous year, although the yield was estimated at 633,000 tons, an increase of 9 per cent. The season was generally good, especially in the Deccan and the Central districts. At the beginning of 1915 prices were very low but they rose rapidly from Rs. 20 per candy in March to Rs. 36-8-0 in July and stood at Rs. 35 at the close of the year. Four-fifths of the whole crop were consigned to Marseilles. Freights to this port have risen enormously since the outbreak of the war ; thus 23*s.* 9*d.* per ton was quoted in July 1914 ; at the beginning of the year under review the rate was 87*s.* 6*d.* per ton, but owing to the scarcity of tonnage and the depredations of enemy submarines in the Mediterranean, rates increased rapidly to 125*s.* in November, to 160*s.* in January and to 180*s.* in March 1916. Exports from the chief port to foreign ports almost doubled. The total quantity shipped at Madras was 97,535 tons compared with 87,975 tons in 1914–15. The copra trade suffered as severely as any through the war, exports having declined by 54 per cent in value. Germany used to be by far the largest buyer of copra, Belgium and Russia standing next upon the list ; and to none of these countries have shipments been made since August 1914. The loss, amounting to Rs. 65·93 lakhs, was to some extent, however, counterbalanced by increased export of coconut-oil. France increased her share from 15 to 56 per cent, this Presidency gaining at the expense of the Philippine Islands ; 48 per cent of the total exports were shipped from Cochin. Exports of raw cotton fell by 8 per cent in volume and 23 per cent in value. Shipments during the first four months showed a decrease of 62 per cent in quantity and 71 per cent in value, but in the remaining eight months there was a decided recovery and shipments were four times as great as those in the corresponding period of the previous year. The area under cotton cultivation was estimated at 2,188,000 acres, an increase of 4 per cent and the estimated yield was 357,000 bales, an increase of 46 per cent. Shipments to Japan rose by 23 per cent and those to China increased threefold. The increase in both these cases was probably due to the relatively low freights from India to the Far East which enabled Indian cotton to oust American cotton from those markets. The increase of 37 per cent in the case of exports to the United Kingdom was due to the larger demand for Indian cotton when the price was low. The larger amounts for Italy and France were mainly for military requirements. Exports of teak and other timber amounted to Rs. 1·92 lakhs against Rs. 2·46 lakhs, and of sandalwood to Rs. 12·27 lakhs against Rs. 4·65 lakhs ; the increase was brought about by the clearance of the accumulated stocks in the Mysore forests. Exports of raw rubber again showed an expansion of 50 per cent in quantity, while the value increased by 31 per cent. The average value declined from Rs. 306 to Rs. 270 per cwt. Shipments to the United Kingdom and Ceylon rose from Rs. 51·63 lakhs to Rs. 63·65 lakhs and from Rs. 21·22 lakhs to Rs. 28·90 lakhs, respectively. The United States was a new customer and received Rs. 3·39 lakhs' worth.

Copra or coconut kernel.

Textile materials.

Wood and timber.

Rubber.

293. Exports of cinchona bark amounted to 607,807 lb. valued at Rs. 1·30 lakhs against 642,987 lb. valued at Rs. 1·43 lakhs in 1914–15, the United Kingdom being the sole consumer. Exports of *nux-vomica* improved from 1,235 tons valued at Rs. 1·56 lakhs to 2,225 tons valued at Rs. 3·28 lakhs and were divided between the United Kingdom and the United States. Shipments of senna rose from 742 tons to 1,599 tons, and from Rs. 2·73 lakhs to Rs. 7·49 lakhs in value. The world's chief sources of this drug, which enters largely into medicinal prescriptions, are the Soudan and the Tinnevelly district and there has been a very active demand for it. There was a remarkable revival in the export trade in dyeing and tanning substances. The war has now brought a reversal of fortunes by diminishing the world's supplies of coal-tar dyes and consequently creating a great demand again for vegetable dyes. The prices quoted for Indian indigo have far exceeded those of twenty years ago, when there was a flourishing trade in this produce. Thus in 1895 the price was Rs. 225 per cwt., but the average value for the year under review was as high as Rs. 416 per cwt. As regards quantity 3,120 tons were

Chemicals, drugs and medicines.

Dyes and colours.

exported in 1895–96 ; thereafter the exports steadily decreased and the average for the five years immediately before the war was 124 tons, but in 1915–16 shipments rose from 270 tons to 1,308 tons valued at Rs. 108·77 lakhs. The total area under indigo in 1915–16 is reported to have been 182,800 acres, which is more than double the actual area sown in 1914–15. The estimated total yield was 24,700 cwt., or 82 per cent above the estimate (13,600 cwt.) of the previous year. There was an eager demand for all the available supplies and 83 per cent of the exports went to the United Kingdom and 8 and 4 per cent, respectively, to Egypt and the United States of America. The total exports of tanned hides and skins improved by 22 per cent in weight and 21 per cent in value. Tanned hides improved by 31 per cent both in weight and in value. At the beginning of the war large stocks of raw hides were accumulated and tanned ; shippers bought freely and sent heavy consignments to the United Kingdom ; the result was a heavy fall in prices. The export of tanned hides was allowed only to the United Kingdom, Ceylon and the Straits Settlements. Exports of cotton twist and yarn improved in quantity from 3·88 million pounds to 5·96 million pounds. The increase is attributed to the resumption of ordinary shipments to Shanghai which had ceased during the first four months of the war, and also to the comparatively low freight rates. The export trade in handkerchiefs made by hand-looms in the north of the Presidency advanced from Rs. 8·21 lakhs to Rs. 13·73 lakhs ; almost all of these went to the United Kingdom for ultimate consumption in Africa. Exports of woollen goods rose from Rs. 2·70 lakhs to Rs. 3·60 lakhs. Articles exported by post increased from Rs. 33·03 lakhs to Rs. 40·39 lakhs.

Hides and skins, tanned or dressed, and leather.

Yarns and textile fabrics.

Re-exports.

294. The value of re-exports improved from Rs. 15·14 lakhs to Rs. 21·59 lakhs and exceeded the figure for 1913–14 by Rs. 1 lakh. Cotton piece-goods sent to the Straits Settlements, Federated Malay States and Ceylon accounted for Rs. 8·98 lakhs, or 41 per cent, and articles by post for Rs. 6·75 lakhs, or 31 per cent.

Treasure.

295. Most of the gold brought from Europe and Egypt to this Presidency comes by rail from Bombay. The imports by sea therefore bear little relation to the actual quantities of treasure received. Only 29 sovereigns were imported in 1915–16. Exports of gold declined from Rs. 23·63 lakhs to Rs. 2·33 lakhs, of which Rs. 2·3 lakhs represented sovereigns shipped to the Straits Settlements. In 1914–15 Rs. 22·57 lakhs' worth of sovereigns were sent to Ceylon, whereas only 23 sovereigns went to that colony in 1915–16. Imports of silver declined from Rs. 17·93 lakhs to Rs. 2·87 lakhs. The quantity of bar silver, almost the whole of which came from the United Kingdom, amounted to 144,760 oz. against 921,027 oz. Imports of Government of India rupees amounted to Rs. 28,000 against Rs. 6,931. Exports of silver consisted mostly of rupees shipped to Ceylon (Rs. 30 lakhs), the Federated Malay States (Rs. 1·35 lakhs) and the Straits Settlements (Rs. ·88 lakh), and were valued at Rs. 32·23 lakhs compared with Rs. 43·94 lakhs in 1914–15 and Rs. 82·38 lakhs in 1913–14.

Gold.

Silver.

Government Transactions.

296. The total value of Government stores imported and exported amounted to Rs. 63·13 lakhs and Rs. 1·55 lakhs respectively as compared with Rs. 36·27 lakhs and Rs. 3·57 lakhs in the previous year. The increase of Rs. 26·86 lakhs under imports was brought about by larger receipts of chemicals (+ Rs. 12·19 lakhs), horses (+ Rs. 8·74 lakhs), metals, woollen goods, apparel, medicines and narcotics and flax manufactures. With exception of horses from Victoria most of the imports were from the United Kingdom. In 1914–15 a number of horses were bought by the Madras War Fund Committee and sent to the Front and the export figures of that year were in consequence about Rs. 2 lakhs more than those of 1915–16.

Shipping.

297. One thousand eight hundred and eighty-seven vessels entered and 1,993 vessels cleared from Madras ports during the year. The average tonnage per vessel was 677 tons, or 142 tons less than in the previous year and 508 tons less than the average for the preceding five years, due in

part to the smaller tonnage of the steamers plying daily between Dhanushkodi and Talaimannar. Excluding these ferry boats the average tonnage of the British vessels entering and clearing was 1,775 tons per vessel, and that of foreign vessels 2,846 tons. Of the 40 vessels which entered under foreign colours 15 were Dutch, 6 Norwegian, 5 Swedish, 4 Italian, 2 French, 2 Greek, 2 Japanese, 2 Russian, 1 American and 1 Belgian. The tonnage of the British vessels amounted to 86 per cent of the whole against 83 per cent in 1914–15. The number of Native craft engaged in the foreign trade rose from 859 to 1,020.

298. The following table shows how the trade of the Madras Presidency with foreign countries was distributed :— **Distribution of foreign trade by countries.**

Countries.	Imports.			Exports.			Total of imports and exports.			Percentage which the total of one country bears to the whole.	
	Average for five years ending 1913-14.	1914-15.	1915-16.	Average for five years ending 1913-14.	1914-15.	1915-16.	1914-15.	1915-16.	Increase or decrease in 1915-16.	1914-15.	1915-16.
	LAKHS. RS.	LAKHS. RS.	LAKHS. RS.	LAKHS. RS.	LAKHS. RS.	LAKHS. RS.	LAKHS. RS.	LAKHS. RS.	LAKHS. RS.		
British Empire—											
United Kingdom	803·29	856·12	762·70	639·92	740·01	946·57	1,596·13	1,709·27	+ 113·14	46·76	47·33
Ceylon	56·56	58·96	69·15	392·93	479·46	644·59	533·42	713·74	+ 175·32	15·78	19·76
Straits Settlements, etc. (including Labuan).	45·89	70·91	71·63	102·10	97·18	127·39	163·09	199·02	+ 30·93	4·92	5·51
Mauritius and Dependencies	4·06	5·19	10·87	14·43	26·50	28·00	31·69	38·87	+ 7·18	0·93	1·08
Victoria	5·97	8·30	12·70	7·54	7·85	8·87	16·15	21·57	+ 5·42	0·47	0·60
Federated Malay States	0·10	0·33	0·60	9·93	7·93	13·03	8·26	13·63	+ 5·37	0·24	0·38
Natal	1·02	0·10	2·06	3·11	2·48	5·15	2·58	7·21	+ 4·63	0·08	0·20
New South Wales	1·18	0·52	0·27	3·33	5·84	5·66	6·36	5·93	− 0·43	0·18	0·16
Western Australia	6·12	8·15	3·09	0·45	0·42	0·41	8·57	3·50	− 5·07	0·25	0·10
Bahrein Islands	...	...	...	3·43	2·24	3·45	2·24	3·45	+ 1·21	0·07	0·09
Canada	0·01	0·01	...	31·17	33·63	2·55	33·64	2·55	− 31·09	0·99	0·07
Aden and Dependencies	0·03	0·03	0·03	1·53	0·65	0·65	0·68	0·68	...	0·02	0·02
Hongkong	2·03	0·51	0·19	1·03	3·63	0·02	4·19	0·21	− 3·98	0·12	0·01
Other British possessions	0·77	0·17	0·32	7·39	5·10	4·13	5·27	4·50	− 0·77	0·15	0·12
Total, British Empire	927·13	1,009·30	933·61	1,218·29	1,412·97	1,790·52	2,422·27	2,724·13	+ 301·86	70·96	75·43
Foreign countries—											
Europe—											
France	39·98	29·38	42·35	341·29	233·54	279·14	312·92	321·49	+ 8·57	9·11	8·90
Italy	2·33	1·62	1·70	36·27	34·76	61·93	36·33	63·63	+ 27·25	1·07	1·76
Sweden	10·23	9·54	13·89	3·96	3·64	...	13·18	13·89	+ 0·71	0·39	0·38
Holland	4·39	2·89	4·45	20·36	18·33	7·44	21·22	11·89	− 9·33	0·62	0·33
Spain	0·20	0·19	0·23	4·91	3·53	8·80	3·72	9·03	+ 5·31	0·11	0·25
Switzerland	1·36	0·82	1·87	0·01	0·96	3·76	1·78	5·63	+ 3·85	0·05	0·16
Norway	2·14	2·35	4·55	0·37	0·70	0·82	3·05	5·37	+ 2·32	0·09	0·15
Germany	62·36	44·84	3·64	211·22	93·72	...	143·56	3·64	− 139·92	4·26	0·10
Portugal	0·09	0·04	0·05	3·37	1·94	2·03	1·93	2·03	+ 0·10	0·06	0·06
Belgium	44·87	17·99	1·73	103·60	58·49	...	76·48	1·73	− 74·75	2·24	0·05
Russia	2·86	0·01	0·01	7·81	15·27	1·52	15·28	1·53	− 13·75	0·45	0·04
Austria-Hungary	24·52	12·34	0·02	37·63	37·57	...	49·91	0·02	− 49·89	1·46	...
Other countries	0·11	0·15	0·50	0·72	0·26	0·41	0·41	2·91	+ 0·50	0·01	0·03
Total, Europe	195·44	122·16	74·99	776·57	557·71	365·85	679·89	440·84	− 239·03	19·92	12·21
Asia—											
Japan	8·40	16·32	23·70	154·56	86·94	82·52	103·26	106·22	+ 2·96	3·03	2·95
Java	35·31	44·76	42·18	1·88	1·63	1·55	46·44	43·73	− 2·71	1·36	1·21
China (exclusive of Hongkong and Macao).	3·30	4·22	4·27	34·92	16·16	34·53	20·38	38·85	+ 18·47	0·60	1·08
Arabia (exclusive of Aden)	0·34	0·58	0·04	3·51	8·27	7·92	8·85	7·06	− 1·79	0·26	0·19
Sumatra	3·38	...	...	0·65	2·26	5·77	2·26	5·77	+ 3·51	0·06	0·16
Indo-China	...	0·02	...	1·45	0·26	3·02	0·23	3·02	+ 2·74	0·01	0·08
Turkey (Asiatic)	1·19	0·94	2·00	4·40	1·86	0·27	2·80	2·27	− 0·53	0·08	0·06
Borneo (Dutch)	3·03	5·66	...	...	...	...	5·66	...	− 5·66	0·17	...
Other countries	1·51	0·60	1·36	2·35	0·97	5·03	1·57	6·44	+ 4·87	0·04	0·18
Total, Asia	56·51	73·10	73·55	203·72	118·40	139·81	191·50	213·36	+ 21·86	5·61	5·91
Africa—											
Egypt	0·24	0·18	0·68	5·32	2·68	9·77	2·86	10·45	+ 7·59	0·08	0·29
Réunion	0·05	0·06	0·03	4·18	...	...	0·06	0·03	+ 0·02	...	...
Other countries	0·25	0·09	...	0·52	0·66	0·53	0·75	0·53	− 0·22	0·03	0·01
Total, Africa	0·54	0·33	0·76	10·02	3·34	10·30	3·67	11·06	+ 7·39	0·11	0·30
America—											
United States	44·09	47·41	70·29	82·36	68·77	151·77	116·18	222·06	+ 105·88	3·40	6·15
Other countries	...	...	...	...	...	0·02	...	0·02	+ 0·02	...	...
Total, America	44·09	47·41	70·29	82·36	68·77	151·79	116·18	222·08	+ 105·90	3·40	6·15
Total, Foreign countries	296·58	243·00	219·59	1,072·67	748·22	667·75	991·22	887·34	− 103·88	29·04	24·57
Grand Total	1,223·71	1,252·30	1,153·20	2,290·96	2,161·19	2,458·27	3,413·49	3,611·47	+ 197·93	100·00	100·00

Imports and exports of treasure and Government stores are excluded from the above table. Of the aggregate trade in the Madras Presidency the British Empire's share, which in 1913–14 amounted to 63 per cent, improved to 71 per cent in 1914–15 and to 75 per cent in 1915–16.

General effect of the war.

299. Before the outbreak of the war the trade of this Presidency with the Continent amounted to 28 per cent of the total trade with foreign countries; in 1914–15 it dropped to about 20 per cent and in 1915–16 to about 12 per cent. Imports declined by Rs. 47·17 lakhs, or 38 per cent, and exports by Rs. 191·86 lakhs, or 34 per cent, making a total deficit of Rs. 239·03 lakhs, or 35 per cent.

Foreign Exports and Imports.

300. France claimed about 9 per cent of the total foreign trade. The increase in the trade with Italy was caused by larger shipments of raw cotton, indigo and groundnut oil, but exports of pepper fell. Sweden supplied more iron and steel and paper than usual and the import trade improved. There were no exports to Sweden, whereas in 1914–15 Rs. 3·64 lakhs' worth of coconut-oil and raw cotton were shipped. The trade with Holland declined by Rs. 9·33 lakhs as a result of reduced shipments of copra; but shipments of coir manufactures increased. Spain received more raw cotton and groundnuts and thereby increased her trade. The average trade with Switzerland during the five years previous to the war was Rs. 1·37 lakhs and rose to Rs. 5·63 lakhs in 1915–16. There were larger imports of watches and increased shipments of coffee, raw cotton, lemongrass oil and coir manufactures. Norway supplied more paper and matches. The trade with Russia declined by Rs. 13·75 lakhs, or 90 per cent, owing to the cessation of shipments of copra and raw cotton. Imports from Germany amounted to Rs. 3·64 lakhs as against Rs. 62·36 lakhs, the average for five years preceding the war. Imports from Austria-Hungary stood at Rs. ·02 lakh against an average before the war of Rs. 24·52 lakhs. There were no exports to that country, which absorbed on an average Rs. 37·5 lakhs in previous years. The import trade with Belgium dwindled to Rs. 1·73 lakhs from Rs. 44·87 lakhs, the average in previous years and exports ceased altogether. The

Asia.

trade with Japan advanced by Rs. 2·96 lakhs. Imports improved by Rs. 7·38 lakhs owing to larger receipts of glassware, matches, stationery, wooden manufactures and articles by post, while exports dropped by Rs. 4·42 lakhs owing to reduced shipments of tanned sheep skins and raw cotton, but there were larger shipments of indigo. A shortage of imports of sugar curtailed the trade with Java. Larger shipments of raw cotton and twist and yarn swelled the trade with China. The trade with Africa improved by Rs. 7·39 lakhs, or by more than 200 per cent, in consequence of larger supplies of indigo to Egypt. The trade with America, which was practically confined to the United States, improved by 91 per cent and the United States were able to capture a considerable amount of the trade with India which previously went to Germany and Austria. America's share of the total trade increased from 3·4 per cent in 1914–15 to 6·15 per cent. The increase of Rs. 83 lakhs, or 120 per cent, under exports was contributed by tanned skins, coconut-oil, raw skins, sandalwood, pepper and rubber.

Africa.

America.

Coasting trade.

301. The aggregate value of coasting trade declined from Rs. 1,328 lakhs to Rs. 1,173 lakhs, or by 12 per cent, Rs. 1,150 lakhs representing private merchandise and Rs. 23 lakhs treasure and Government stores. Imports coastwise of both Indian and foreign produce continued to decrease and there was a fall of 12 per cent and 7 per cent respectively, the figures for the former being Rs. 586·65 lakhs and for the latter Rs. 73·66 lakhs. Exports of Indian produce fell from Rs. 544·47 lakhs to Rs. 479·14 lakhs, or by 12 per cent, and those of foreign merchandise improved from Rs. 9·31 lakhs to Rs. 10·89 lakhs. The decrease in the imports from Burma was due to smaller receipts of grain, pulse and kerosene-oil; but imports of wood and timber and raw hides increased. The increased exports to Burma were the result of heavier shipments of cotton piece-goods, gingelly seeds and provisions. The improvement of Rs. 3·03 lakhs in imports from Bombay was brought about by larger receipts of grain and pulse, sugar, salt, cotton twist, books, matches and paper. The contraction in the case of exports to Bombay was due to reduced shipments of raw cotton, coconuts, betelnuts and cardamoms, but shipments of copra and coffee increased. Imports from Bengal declined by Rs. 31·17 lakhs, or by

Burma

Bombay.

Bengal.

42 per cent, and exports to that province by Rs. 49·50 lakhs, or by 37 per cent. There were smaller receipts of coal (— Rs. 14·53 lakhs), grain and pulse (— Rs. 11·87 lakhs) and jute gunny bags, while the reduction under exports was the net result of smaller shipments of groundnuts (— Rs. 43·34 lakhs), coconut-oil (— Rs. 11·37 lakhs), raw cotton (— Rs. 9·44 lakhs), pepper, turmeric, coir manufactures and cardamoms, partly counterbalanced by heavier shipments of rice, indigo, cotton twist and salt. Smaller receipts of grain and pulse by Rs. 20·99 lakhs and sugar by Rs. 1·91 lakhs reduced the import trade with Sind, but larger shipments of copra increased the export trade. There was only a slight variation in the trade with non-British Indian ports, larger imports of coffee from Goa having been counterbalanced by smaller shipments of betelnuts and groundnut-oil to Kathiawar. Other ports.

302. The following table shows the total trade (excluding Government transactions) and comparative importance of the principal ports in the Madras Presidency :— Ports.

Ports.	Average for five years ending 1913-14.	1914-15.	1915-16.	Increase or decrease in 1915-16.	Percentage of trade of the whole Presidency for 1914-15.
	LAKHS. RS.	LAKHS. RS.	LAKHS. RS.	LAKHS. RS.	
1. Madras	2,012·42	1,907·86	2,027·75	+ 119·89	2·21
2. Tuticorin	860·61	788·78	766·40	— 22·38	15·95
3. Cochin	628·23	682·03	555·32	— 126·71	11·56
4. Dhanushkodi	0·16	74·33	241·87	+ 167·54	5·03
5. Calicut	242·08	229·51	228·51	— 1·00	4·76
6. Cocanada	284·93	249·45	206·93	— 42·52	4·31
7. Mangalore	179·40	195·25	176·31	— 18·94	3·67
8. Negapatam	197·97	149·48	175·56	+ 26·08	3·65
9. Cuddalore	174·45	109·50	103·41	— 6·09	2·15
10. Tellicherry	124·59	117·28	80·47	— 36·81	1·67
11. Badagara	50·45	37·30	26·07	— 11·23	0·54
12. Porto Novo	53·03	39·03	24·50	— 14·53	0·51
13. Kulasekharapatnam	19·82	24·34	23·35	— 0·96	0·48
14. Cannanore	51·29	22·85	19·36	— 3·49	0·40
15. Pamban	19·12	14·28	15·08	+ 0·80	0·31
16. Bimlipatam	37·59	18·42	12·87	— 5·55	0·27
17. Vizagapatam	27·66	13·62	8·67	— 4·95	0·18
18. Masulipatam	15·13	9·38	6·16	— 3·22	0·13

There were only slight alterations in the relative importance of the trade of the outports. Dhanushkodi, which occupied the tenth place in 1914-15, ranked fourth in the year under review and shared with Negapatam the distinction of being the only outports to show an improvement in trade. Tuticorin maintained the first place among the subordinate ports of the Presidency in spite of the diversion of some of its trade to Dhanushkodi ; one reason for this was that considerable difficulties were experienced in handling cargo sent to Colombo by the new route and the general feeling was that the all-sea route from Tuticorin gave greater satisfaction ; at various times also troublesome delays occurred and the consequent congestion of traffic in rice bags both at Dhanushkodi and on the Ceylon side caused many complaints.

303. The total revenue receipts for the Presidency declined from Rs. 88,22,102 to Rs. 79,14,127 or 10 per cent. The number of offences dealt with under the Sea Customs Act was 1,488 against 1,610 in the previous year. A fine of Rs. 10,000 was imposed by the Collector on the sender of a number of boxes of egret feathers which were consigned by parcel post from Madras to London. The feathers were confiscated. At Madras there were three cases of smuggling of opium. In two of these the quantities seized were small, in the third case the quantity was about 160 tolas. At Cocanada a case of smuggling of 435 tolas of opium was detected and the accused was sentenced to three months' simple imprisonment. Miscellaneous.

PUBLIC WORKS—GENERAL. (1915-16.)

[*Administration Report of the Public Works Department, Madras Presidency, for the year 1915-16.*]

Administrative changes.

304. There were no administrative changes in the direction of the department. In December 1915, the privilege of gazetted rank was bestowed on permanent civil upper subordinates of the Public Works Department below the rank of sub-engineer appointed to temporary posts of sub-engineers or placed in charge of sub-divisions in temporary or officiating capacities. Nine officers of the Engineer establishment and five officers of the upper subordinate establishment joined Military duty. Owing to the reduction of grants on account of the war, the Tank Restoration Scheme division in I Circle was abolished, but a small establishment was maintained for the purpose under a sub-divisional officer attached to the Gōdāvari Northern division. In II Circle the temporary sub-division called the Bezwada special sub-division formed in December 1914 for the restoration of the Bezwada head works was closed. As it was necessary to carry out a number of urgent works in connection with the Government House at Ootacamund, an executive division was created in IV Circle for about four months.

Chief Engineer's office.

Technical section.

305. Sixty-five estimates of the aggregate value of Rs. 77·14 lakhs were scrutinized in the Technical section, of which 19 (of the value of Rs. 30·42 lakhs) dealt with water-supply, including water-works for Tuticorin (Rs. 17·68 lakhs), Palni (Rs. 4·33 lakhs) and Erode (Rs. 1·20 lakhs) and improvements to the water-supply at Tanjore ; 26 estimates for Rs. 25·23 lakhs in all were for roads and bridges, the most important being bridges over the Mahanadi at Aska, the Netravati at Panemangalore, the Kolab river in Vizagapatam district and the Devakottai river in Rāmnād district. Estimates for Rs. 5·09 lakhs were prepared for roads in the Vizagapatam district ; in addition six drainage schemes were worked out, the principal one being the Trichinopoly drainage works which were estimated to cost Rs. 12·54 lakhs. Seventy-eight estimates and designs were scrutinized in the Consulting Architect's section and their aggregate value was Rs. 36,63,949. Of these 41 were for buildings estimated to cost over Rs. 20,000 each and 12 for buildings costing from Rs. 10,000 to Rs. 20,000. Estimates over one lakh in value dealt with the construction of the Madura Collector's office and the Royapuram Hospital, and the building of 231 cells in the Penitentiary. The Consulting Architect to Government prepared 242 drawings for various buildings and also specifications and schedules of quantities for some of them. Eleven revised type-designs were issued. The scheme for the supply of water and electricity to the town of Coimbatore and its neighbourhood from the Siruvani river source was still under consideration ; the proposal from the South Indian Railway Company to erect large railway workshops at Podanur provided cheap electric power was available, made the scheme larger than originally proposed. Pending the result of this scheme the proposal to supply the town of Ootacamund with electric power was held in abeyance. Detailed plans and estimates to suit the requirements of the educational authorities for the power-house plant and building for the new Engineering College, Guindy, estimated to cost Rs. 1,07,000, were under preparation. Estimates for electric installations to the new chemistry block of the Presidency College, Madras (Rs. 20,947), the Veterinary College, Madras (Rs. 10,517), and New Court-house for the Chief Presidency Magistrate, Egmore (Rs. 5,350) were under consideration. The Electric Inspector scrutinized 116 estimates with an aggregate value of Rs. 1,20,875 ; six were for installations costing over Rs. 5,000 and 23 for installations costing from Rs. 1,000 to Rs. 5,000. Important works completed were installations at the old College, Nungumbaukam (Rs. 16,700), Government Ophthalmic Hospital Extension (Rs. 16,330), Women's College and Hostel, Madras, and Surgeon's quarters at Government House, Guindy, and additions to the Accountant-General's office (Rs. 9,181). The erection of the installation at the King Institute was nearing completion ; at the

Consulting Architect's section.

Electrical Department.

Stationery Stores, Madras, the new electric lifts and cranes were nearly ready and the work in the Royapuram Hospital was only delayed by the difficulty in getting supplies from England. Sixty-nine electric installations were maintained under the department and with the exception of ten, all were inspected and tested. The cost of maintenance, apart from actual current consumption, was approximately Rs. 43,603. There were 117 electric plants notifiable under the Act and 93 installations were inspected ; the Madras Electric Supply Corporation's works necessitated 164 inspections. One general point worthy of remark was the crude work done by men styled electrical contractors who do very indifferent and in some cases dangerous wiring work at prices which preclude good work. There were about 19 touring electric cinematograph companies and rules for controlling these risky plants were issued. Seven accidents were reported and all were trivial. There was a steady increase in the use of electricity in Madras City : the number of consumers increased from 1,777 to 2,009 and the quantity of electricity sold from 4·7 to 5·1 million units. About 48 industrial concerns were worked with electric power and to meet the increasing demand for energy, extensions under the alternating current system to the suburbs of Kilpauk, Adyar and Royapuram were in progress ; the delay in carrying out these extensions was due to non-receipt of materials from Home on account of the war.

CIVIL AND MILITARY WORKS. (1915–16.)

306. The expenditure for the year, including expenditure from contributions, minor works and repairs, was Rs. 69·92 lakhs as compared with Rs. 76·33 lakhs in the previous year. All works connected with the Forest College, Coimbatore (estimate Rs. 6·59 lakhs) were completed and handed over. The construction of a new Stationery office at North Beach, Madras, was in progress, the outlay during the year being Rs. 72,782 and the total outlay Rs. 3,29,109 against the estimated cost of Rs. 3·54 lakhs. Progress was made on the construction of a new Collector's office at Madura ; the outlay during the year was Rs. 95,375 and the total outlay Rs. 3·68 lakhs against the estimated cost of Rs. 3·83 lakhs. A lakh was spent on the construction of the new Engineering College at Guindy (estimate Rs. 14·96 lakhs) and the total expenditure amounted to about two lakhs. The new hostel for the Madras College for Women, with sanitary fittings and electric lights, was built and occupied within six months from the date of commencement of the work ; the expenditure amounted to Rs. 73,181. The construction of the new Technical Institute at Madura and a new court-house for the Chief Presidency Magistrate, Egmore, made good progress. Under Imperial Civil Works an outlay of Rs. 26,000 was incurred on improvements to the customs accommodation at Cochin (estimate Rs. 1,25,000) bringing the total expenditure to Rs. 74,587. Two corrugated iron godowns were completed and the quay wall and the customs office were in progress. Under Communications, Rs. 34,000 were spent on the new Kalingi Ghat road (estimate Rs. 1·86 lakhs). The Kodaikānal Ghat road costing Rs. 6,58,161 and the bridge over the Indravati river costing Rs. 3,89,930 were completed and opened for traffic. Twenty-two water-supply schemes were in course of execution. More than two lakhs were spent on each of the schemes in connection with Masulipatam and Ellore, Rs. 1·83 lakhs were spent at Tirupati and Rs. 1·36 lakhs at Erode. The major portion of the work at Berhampur was finished ; the pumping engines for the Masulipatam works were lost at sea on the way out, but otherwise the works were practically complete ; the new infiltration gallery at Dindigul was finished and the Kodaikānal water-works were handed over. The drainage schemes at Madura and Vellore were under construction and the year's expenditure on these was Rs. 2,53,629 and Rs. 82,000, respectively ; about 27 miles of open drains were constructed in the latter town. Towards the construction of a pier, 560 feet long, from the wharf wall at Tellicherry port Rs. 37,243 were spent, mainly on the

Works in progress.

Buildings.

Roads and bridges.

Water-supply and drainage.

Port and Marine works.

collection of materials. Estimates aggregating Rs. 24,550 were sanctioned for protective measures for the Vypeen foreshore, Cochin. Improvements to the Vizagapatam harbour were held in abeyance pending the settlement of the new harbour scheme.

Workshops.

307. At the Dowleswaram Workshops the outturn fell to Rs. 1,57,646 against Rs. 2,16,337 in the previous year owing to the general curtailment of operations in public departments. The new machine shop was practically finished except in some minor details, the expenditure on its alterations amounting to Rs. 29,240 ; an important job executed in the workshop was the building of ten barge-shaped punts. At Bezwada the value of the work executed fell similarly from Rs. 1,15,426 to Rs. 1,03,186 ; 992 work orders were registered against 1,113 and 844 in the last two years, and this was due to the completion of the work of reconstructing the Bezwada head works. At the Presidency workshops the value of the outturn fell from Rs. 2,67,258 to Rs. 2,40,531 ; the decrease was noticeable in the work executed for every department. The workshops undertook part of the processes of manufacturing high explosive shells ; during the nine months of the year that the work was in progress the value of labour amounted to about Rs. 4,000 and the lathes set apart for this work were kept running day and night. Two more lathes were lent to the Perambur Workshops for use there on munition work.

RAILWAYS AND TRAMWAYS. (1915–16.)

[*Administration Report of the Public Works Department, Madras Presidency, for the year 1915–16 ; Statistics of British India, Part III—Commercial Services.*]

Control.

308. The main railway systems were controlled by the Railway Board and the District Board Railways were subject to the general control of this Government.

Development.

309. During the year 61·99 miles of new railway were opened to traffic, bringing up the total mileage of the railway systems to 4,014·51 miles, of which 1,715 were broad gauge, 1,966 metre gauge and 123 miles narrow gauge. There were also 210 miles of railway owned by the Tanjore, Kistna, Coimbatore and Guntūr District Boards. The new lines opened for traffic were—15·86 miles by the Madras and Southern Mahratta Railway from Guntūr to Tenali, forming a chord between the two existing stations on the metre and broad gauge sections of that railway ; 21·09 miles from Tenali to Rēpalle, constructed on behalf of the District Board of Guntūr to form, together with the Guntūr-Tenali line, a continuous line from Guntūr to Tenali which is a rich rice growing place ; and 25·04 miles from Podanur to Pollachi, constructed and worked by the South Indian Railway on behalf of the District Board of Coimbatore, and opened for traffic on the 15th October 1915. The lines sanctioned or in the course of construction were 23·12 miles from Tirutturaippūndi to Vēdāranniyam, 38·18 miles from Tinnevelly to Tiruchendur, and 3·86 miles from Suramangalam to Salem. These lines were under construction by the South Indian Railway Company on behalf of the District Boards of Tanjore, Tinnevelly and Salem ; the two first are metre-gauge and the last a broad-gauge line. In addition the South Indian Railway was building on behalf of the Travancore Darbar 38 miles of metre-gauge line from Quilon to Trivandrum. 24 District Board lines and 16 other lines were under consideration ; in some cases plans and survey were ready and construction was only awaiting the allotment of funds ; in other cases the preliminary or detailed survey had yet to be completed ; there were several cases in which private companies had offered to construct the lines under the branch line rules for the District Boards.

310. There were two serious accidents, the first being on 19th May when a passenger train collided with 13 goods trucks in the Coimbatore station yard, the points being wrongly set. Some damage was done to the rolling-stock and to the permanent way and two passengers and the guard were slightly injured. The other collision occurred on 9th August at Alamanda station yard ; the incoming train was allowed on the main line on which there was already a goods train standing. Both engines were damaged and there was a slight damage to the rolling-stock and two passengers received minor injuries. On 5th May an inspection carriage was blown out of the Guntakal station yard during a storm ; the carriage travelled through two stations and collided with a down goods train ; it was flung off the track and fell over the side of the masonry arch bridge and was completely wrecked. On 3rd October, owing to heavy rains an arch bridge on the Vizianagram-Parvatipur line subsided and about 180 feet of permanent way were badly damaged. In consequence a mixed train was derailed, causing damage to the engine, four goods wagons, two coaches and a brake-van. The damages amounted to Rs. 85,000, but there was no loss of life. **Accidents and breaches.**

311. The model agreement for the working of District Board railways was under correspondence with the Railway Board and the execution of agreements for the railways newly constructed and in course of construction was held in abeyance. The Bezwada-Masulipatam Railway earned a net profit of Rs. 4,18,796 which worked out at 10·40 per cent on the capital ; the profits of the Tenali-Répalle Railway, the Tanjore District Board Railway and the Podanur-Pollaci Railway on the same basis of calculation were ·13, 8·16 and 3·08 per cent, respectively. **District Board Railways.**

312. The Madras Electric Tramway was the only tramway system ; the company operated a route mileage of 14 miles, 6 furlongs and 107 yards of which 5 miles and 152 yards were double track. The plant at the power station, namely two Burnley horizontal engines, two Willans central valve engines, one Bellis and Morcom engine and one Diesel oil engine, was used only as a standby, current being obtained from the Madras Electric Supply Corporation, Limited. The rolling-stock consisted of 70 motor-cars, 14 trailers, 1 bond testing car, 1 road metal carrying car and 1 watering car. The average daily service was 63 cars as in the previous year. The car mileage was 1,573,582 and the number of passengers carried 18,999,490. **Tamways.**

PUBLIC WORKS—CANALS. (1915-16.)

313. Navigation was carried on as usual on the Chilka Lake canal, the Dumagudem, Gōdāvari, Kistna, Kurnool-Cuddapah, Buckingham and Vēdāranniyam canals. The receipts amounted to Rs. 2,34,779 and were Rs. 13,789 more than in the preceding year ; the increase occurred chiefly under the Kistna and Gōdāvari canals, and in the latter case was attributed to the opening of the new lock at Vizeswaram. The traffic on the Kistna canals had been greatly hindered in the previous year by the collapse of the Eastern delta head sluice and resumed its normal state when the sluice was rebuilt. **Canals.**

314. Compared with the figures of the previous year, there was a decrease under "number of passengers," but an increase under "ton-mileage" and "value of goods." The former occurred mainly under the Gōdāvari canals and was reported to be due to the opening of motor services in certain portions of the delta. **Traffic.**

PUBLIC WORKS DEPARTMENT—IRRIGATION. (1915-16.)

Gross expenditure and revenue.

315. The expenditure incurred on and the revenue derived from irrigation works were Rs. 81,15,716 and Rs. 2,75,80,236, respectively, against Rs. 88,28,640 and Rs. 2,64,11,904 in the previous year. The area charged as irrigated was 7,378,814 acres.

Class I. Major Protective works.

316. There were four works sanctioned under this head : the Rushikulya system in the Ganjām district, the Bhavanasi tank project in the Guntūr district, the Mopad reservoir project in the Nellore district and the Venkatapuram tank project in the Kurnool district. The Rushikulya system was in operation, but the other three works were still under construction. The capital outlay in the year under this head was Rs. 3,88,122 (direct and indirect), the bulk of which was spent on the projects under construction. The area irrigated under the Rushikulya system was 105,297 acres of first crop and 3,218 acres of second crop. The gross revenue (including old irrigation revenue) and working expenses were Rs. 2,66,094 and Rs. 79,227, respectively, against Rs. 2,63,609 and Rs. 69,228 in the previous year. The net revenue, deducting interest charges, showed a deficit of Rs. 1,02,026 against Rs. 82,861 in the preceding year.

Productive works.

317. The capital outlay on productive works aggregated Rs. 9,34,886 (direct and indirect) and was mainly incurred on the Gōdāvari and the Kistna delta systems, the Kurnool-Cuddapah canal, the Toludur project and the Cauvery delta system ; the Toludur project was the only work of this class under construction. In the Gōdāvari delta system the diversion of the Vasista Gōdāvari left bank at Sakinettipalli was completed, and the improvements to the Yenamadurru drain were in progress. Other works commenced were the remodelling of the Chinchinada channel, restoring the Kovvur-Manjair junction canal, improvements to the mouth of the Tuliabhaga drain, excavating a new approach channel to Bobberlanka lock and constructing a retaining wall below the head sluice on the right side of the Eastern delta main canal. In the Kistna delta system the reconstruction of the Bezwada head works was completed, and the improvements to the Ryves' regulator were commenced. In the Kurnool-Cuddapah canal the Chepad and the Ukkayapalli projects were under execution. In the Cauvery delta system the improvements to the Manniar, the Vellapalem-Uppanar, the Pillaivoikal and the Marakakorayar channels were in progress. The total area charged as irrigated was 3,007,893 acres under first crop and 491,946 acres under second crop against 2,982,452 acres and 410,088 acres, respectively, in the previous year.

Revenue.

318. The gross revenue and working expenses, inclusive of old irrigation revenue and old maintenance charges, amounted to Rs. 1,59,01,094 and Rs. 34,04,097, respectively, against Rs. 1,54,35,254 and Rs. 36,76,859 in the previous year. The net revenue due to improvements was Rs. 85,08,401, which represented a return of 9·9 per cent on the capital outlay of Rs. 8·59 crores. The profit for the year after deducting interest charges was Rs. 57,15,360, the accumulated profits to the end of the year amounting to Rs. 15·61 crores. The gross revenue, when compared with that of the previous year, showed an increase of Rs. 4,65,840 which occurred chiefly under the Gōdāvari delta system and the Kurnool-Cuddapah canal.

Expenditure under Revenue account.

319. There was a decrease of Rs. 2,72,762 under "working expenses"; for the expenditure in the previous year had been particularly heavy owing to the reconstruction of the Vizeswaram lock and the Bezwada head works.

Remissions.

320. The remissions granted both under protective and productive works were Rs. 2,347 and Rs. 1,30,127 against Rs. 6,760 and Rs. 2,55,646 in the previous year. The bulk of the remissions were granted on the Gōdāvari and the Kistna delta systems.

Class II. Minor Works and Navigation.

321. The capital outlay incurred on "Minor Works and Navigation" was Rs. 2,91,987 (direct and indirect), the major portion being incurred on the Siddapur project in the Kurnool district and the Panjapatti reservoir project in the Trichinopoly district. The area charged as irrigated by this class was 269,463 acres under first crop and 94,003 acres

under second crop against 268,489 acres and 90,021 acres, respectively, in the previous year. The gross revenue and working expenses, including old irrigation revenue and old maintenance charges, amounted to Rs. 15,17,813 and Rs. 4,20,224 against Rs. 15,02,537 and Rs. 4,96,519 in the preceding year; the net revenue due to improvements increased by Rs. 91,478. Remissions increased from Rs. 7,344 to Rs. 10,006 and were for the most part granted under the Hajipuram and the Chembrambakam tanks and the Pālār anicut system.

Class III. Works.

322. The outlay on this class of works amounted to Rs. 25,25,767, including the outlay incurred by Civil officers and accounted for by the Civil department. The area charged as irrigated was 3,406,994 acres and the revenue derived amounted to Rs. 98,20,576, including Rs. 46,247 collected in the Public Works Department. Rs. 4,40,432 were remitted against Rs. 8,87,848 in the previous year.

Tank Restoration Scheme.

323. The area of minor basins entered upon at the beginning of the year was 82,159 square miles, of which 76,258 square miles had been completed. The work of the year consisted of 998 square miles under the first head and 797 square miles under the second, so that in all 83,157 square miles had been entered upon and 77,055 square miles investigated. The area under all works to be investigated under the scheme, classes III (*a*) and III (*b*), was calculated to be about 103,750 square miles. In the area investigated the necessary works were completed for 67,409 square miles and were in progress for 3,794 square miles, and, of the balance, irrigation sources affecting 6,102 square miles were under investigation. The estimates sanctioned for Government works amounted to Rs. 2,65,217 against Rs. 6,68,684 in the previous year, the amount sanctioned for Government works from the beginning of the operations up to the end of the year being Rs. 1,34,67,741, of which all but Rs. 20 lakhs had been spent; the year's expenditure was Rs. 4,16,308.

Class IV Agricultural works.

324. The outlay incurred on these works decreased from Rs. 8,64,631 to Rs. 6,68,807 and the revenue realized, Rs. 74,659, exceeded that of the previous year by Rs. 17,591.

Investigation of projects.

325. The revised estimate for the Cauvery reservoir project was still with the Government of India. In the office of the Chief Engineer for Irrigation the plans and estimates for the Kistna reservoir project were still under revision and the plans and estimates for the Vengalapuram project in the Nellore district, the Velgode project in the Kurnool district, and the improvements to the Kurnool-Cuddapah canal were being considered; a scheme under preparation was the Cardamom Hills project, which is intended to supplement the flow of water from the Periyār lake, in order that the continuous generation of power may be possible. Plans and estimates for the Uttiramerur project in the Chingleput district were prepared and the financial aspect of the scheme was under examination by the Board of Revenue.

Small projects.

326. Small projects not yet matured were: investigations in the Ganjām district in connection with the improvements to the Korathala Tampara and the Girisola channel, the Vamsadhara project and the proposed anicut across the Langulya. Preliminary field work in connection with the Thandava or Tuni river project in the Vizagapatam district was in progress. In the Gōdāvari district estimates for the extension of irrigation to the Coringa and the Polavaram islands, amounting to Rs. 4,42,000 and Rs. 9,31,600, respectively, were prepared. In the Nellore district a proposal was under consideration to excavate a surplus channel from the Kanigiri reservoir. The investigation connected with the Thippayapalaiyam project in the Kurnool district was completed and certain particulars called for by the Chief Engineer for Irrigation were being collected, and in the Coimbatore district the investigation in connection with the resluicing of the Amarāvati and Aliyar channels was continued. A preliminary report on the Amarāvati project was submitted and the revenue forecast was under preparation. The estimate for the restoration of the Kaniyampalaiyam anicut across the Bhavāni was sanctioned. The revenue aspects of the Meengarai and the Malapuzha projects were under examination, and preliminary reports

for the Vanditode and the Kilakancheri projects were being prepared; in connection with these four projects gauge-readings were taken to ascertain the quantities of water available. The Nilambur river project, to render the river navigable for the transport of forest produce, was under investigation. Field work in connection with the Kundichera project, which consists of the construction of a dam across the river of that name to increase the irrigation under an existing channel, was completed. In the Chingleput district the plans and estimates for the proposed supply channel to the Kolathur tank from the Neenjal Madugu were under the consideration of the Local Government. A preliminary report on the Thambipettai odai project in the South Arcot district was drawn up and further information regarding the areas irrigated and the remissions granted under the Sengal odai close by was being collected. The Tennel and the Uppalavadi projects were under the consideration of the local officers. The investigation connected with the disposal of the Vellar spill above the Shatiatope regulator was completed and an estimate was under preparation. The works proposed in connection with the Chidambaram drainage scheme were generally approved by the Chief Engineer for Irrigation. The proposals submitted for improvements to the Vadavar and those for the extension of irrigation in the Muttupet salt swamp were under consideration. In the Trichinopoly district preliminary reports were drawn up for improvements to the Iyen and Peruvalai channels and for the Kanagachittoor project. Plans and estimates for the Pimbalur and Pasumbalur projects were prepared. Information regarding the porosity of the soil and subsoil at the site of the proposed reservoir at Ladapuram was being collected.

Miscellaneous.

Floods.

327. On no river system did floods in this year reach within measurable distance of record floods of past years. In the Gōdāvari the highest reading in the year was 10·80 feet on the crest of the anicut at Dowleswaram on the 15th September, and in the Kistna the maximum flood was 13·70 feet on the crest of the Bezwada anicut on the 6th August. In the Tungabhadra the highest reading was 4·80 feet on the crest of the anicut at Sunkesula. The Cauvery rose to 9·4 feet on the Cauvery dam and in the Vaigai the highest flood was recorded at Peranai on the 27th November when the front reading at the regulator with nine shutters raised by 8 feet was 9·00 feet above the sill.

Breaches, accidents, etc.

328. Some damage was caused by floods in the Nagavalli to the revetment below the left wing of the regulator, which was subsequently grouted. The head sluice and the first furlong of the Dasa channel were washed away completely by the floods of October and in the Muniyeru some damage was done to the anicut and other works. The heavy storms of November caused some damage to the irrigation works in the Nellore district; a length of the revetment of the Kanigiri reservoir bund was displaced by wave action, but serious consequences were averted by prompt measures; a breach also occurred in the left embankment of the Pennar at the 21st mile. The Buckingham canal north of the Pennar suffered from a tidal wave due to the cyclone of the 5th November, which caused an abnormal rise of the tide to 4 feet above high water mark as recorded at the Paleru lock, and a considerable amount of damage was caused to the canal banks for a length of over 50 miles. On the 8th July a breach occurred on the Kurnool-Cuddapah canal near the Tharigopala aqueduct, and though this was closed, six weeks later another breach occurred just by the side of the original one.

Gauging operations.

329. Gaugings were made in the Gulleri, the Mahanadi and the Rushikulya canals and in some of the distributaries. A set of observations by direct measurement was carried out at the Alamur lock on the discharges through earthenware pipes of different diameters under varying heads of flow, and a report on the results of these observations was under preparation. The preparation of the ayacut registers of the Gōdāvari and the Kistna deltas continued and the ayacut maps and registers for many of the channels of the Kurnool-Cuddapah canal were complete. Field work for the preparation of the contour maps of the Cauvery delta was also completed for the Vennar section.

Ayacut maps.

CHAPTER V.

REVENUE AND FINANCE. (1915-16.)

[*Statistics of British India, Part IV (a) and (b)—Finance and Revenue.*]

REVENUE AND FINANCE OTHER THAN MUNICIPAL.

(a) GROSS REVENUE.

Revenue and Expenditure.

330. The following statements exhibit the Imperial and Provincial revenue and expenditure as well as the Capital expenditure on State Railways and Irrigation Works not charged to Revenue during each of the past two years:—

Imperial and Provincial Funds—Receipts.

Principal Heads of Revenue.	Imperial.		Provincial.		Total.	
	1914-15.	1915-16.	1914-15.	1915-16.	1914-15.	1915-16.
	RS.	RS.	RS.	RS.	RS.	RS.
I. Land Revenue	3,33,67,954	3,43,96,825	3,33,67,953	3,48,96,825	6,77,35,907	6,97,93,650
II. Opium	4,02,093	4,02,759	...	...	4,02,093	4,02,759
III. Salt	1,17,06,293	1,15,75,575	...	...	1,17,06,293	1,15,75,575
IV. Stamps	69,49,142	75,50,999	69,49,142	75,50,999	1,38,98,284	1,51,01,998
V. Excise	1,83,09,367	1,75,59,379	1,83,09,367	1,75,59,379	3,66,18,734	3,51,18,758
VII. Customs	88,22,090	79,50,349	...	...	88,22,090	79,50,349
VIII. Income-tax	20,14,175	20,37,323	20,14,175	20,37,323	40,28,350	40,74,646
IX. Forest	...	...	39,41,537	41,06,833	39,41,537	41,06,833
X. Registration	...	...	22,43,183	23,37,549	22,43,183	23,37,549
XI. Tributes	44,96,519	44,96,519	...	...	44,96,519	44,96,519
XII. Interest	5,89,161	6,55,503	4,42,929	4,52,295	10,32,090	11,07,798
Receipts by Civil Departments.						
XVI-A. Law and Justice—						
A. Courts of Law	...	...	11,44,480	12,00,387	11,44,480	12,00,387
B. Jails	...	...	6,25,005	5,10,531	6,25,005	5,10,531
XVII. Police	...	...	4,94,132	5,06,454	4,94,132	5,06,454
XVIII. Ports and Pilotage	...	...	63	63	63	63
XIX. Education	...	...	3,23,120	3,09,763	3,23,120	3,09,763
XX. Medical	...	...	1,51,561	1,33,752	1,51,561	1,33,752
XXI-A. Agriculture	...	...	1,19,810	1,70,943	1,19,810	1,70,943
XXI-B. Scientific and Miscellaneous Departments.	...	...	8,67,866	11,13,442	8,67,866	11,13,442
Miscellaneous.						
XXII. Receipts in aid of Superannuation.	1,26,176	1,31,134	1,05,362	1,21,255	2,31,538	2,52,389
XXIII. Stationery and Printing ...	21,409	19,272	1,26,551	1,24,083	1,47,960	1,43,355
XXV. Miscellaneous	75,774	64,608	2,24,891	3,59,257	3,00,665	4,23,865
Railways.						
XXVI. State Railways (gross receipts).	7,05,35,169	7,66,85,308	...	...	7,05,35,169	7,66,85,308
Deduct working expenses.	4,39,16,564	4,35,33,215	...	...	4,39,16,564	4,35,33,215
Net Receipts	2,66,18,605	3,31,52,093	...	...	2,66,18,605	3,31,52,093
XXVIII. Subsidised Companies—Repayment of advances of interest.	2,12,914	1,32,862	...	...	2,12,914	1,32,862
Revenue from Productive Public Works.						
XXIX. Irrigation—Major Works—						
Direct Receipts	1,50,149	1,47,184	1,50,150	1,47,184	3,00,299	2,94,368
XXX. Minor Works and Navigation in charge of—						
Civil Officers	...	...	19,781	24,239	19,781	24,239
Public Works Officers ...	...	...	2,09,063	2,35,267	2,09,063	2,35,267
XXXI. Civil Works in charge of—						
Civil Officers	...	...	11,753	1,70,447	11,753	1,70,447
Public Works Officers ...	3,351	3,194	3,97,047	4,32,189	4,00,398	4,35,383
Total ...	11,43,65,177	12,07,78,533	7,27,38,926	7,45,05,474	18,71,04,103	19,52,84,057
Transfers between Imperial and Provincial Revenues.	— 29,95,256	— 22,56,398	+ 29,95,256	+ 22,56,398	...	...
Grand Total ...	11,13,69,921	11,85,22,185	7,57,34,182	7,67,61,872	18,71,04,103	19,52,84,057

Imperial and Provincial Funds—Charges.

Heads of account.	Imperial.		Provincial.		Total.	
	1914-15.	1915-16.	1914-15.	1915-16.	1914-15.	1915-16.
EXPENDITURE CHARGED TO REVENUE.	RS.	RS.	RS.	RS.	RS.	RS.
1. Refunds and drawbacks	4,12,679	4,07,956	2,49,450	2,40,209	6 62,129	6,48,165
2. Assignments and compensations ...	9,51,847	10,32,143	2,77,559	3,09,736	12,29,406	13,41,884
3. Land Revenue	...	...	1,25,47,253	1,23,54,313	1,25,47,253	1,23,54,313
5. Salt	14,21,634	15,79,370	...	...	14,21,634	15,79,370
6. Stamps	2,16,888	2,06,945	2,16,888	2,06,945	4,33,776	4,13,890
7. Excise	9,16,869	9,26,243	9,16,870	9,26,244	18,33,739	18,52,487
9. Customs	4,14,611	4,19,599	...	...	4,14,611	4,19,599
10. Income-tax	20,611	30,231	20,610	30,230	41,221	60,561
11. Forest	...	...	28,60,635	29,27,318	28,60,635	29,27,318
12. Registration	...	...	12,73,535	12,55,970	12,73,535	12,55,970
13. Interest	...	...	3,23,076	3,31,295	3,23,076	3,31,295
14. Interest on other obligations	1,73,955	1,90,874	...	...	1,73,955	1,90,874
18. General administration	4,65,999	5,07,639	15,22,569	15,51,635	19,88,563	20,59,274
19. Law and Justice—						
A. Courts of Law	...	...	82,64,186	84,46,964	82,64,186	84,46,964
B. Jails	...	...	15,43,300	15,27,698	15 43,300	15,27,698
20. Police	...	...	1,09,30,903	1,10,09,361	1,09,30,903	1,10,09,361
21. Ports and Pilotage	...	...	36,552	47,020	36 552	47,020
22. Education	...	...	78,31,353	76,96,561	78,31 353	76,96,561
23. Ecclesiastical	3,23,132	3,50,115	...	...	3,23,132	3,50,115
24. Medical	...	...	25,18,219	50,29,347	25,18,219	50,29,347
25. Political	54,193	46,914	85,269	85,757	1,39,462	1,32,671
26A. Agriculture	...	...	8,83,060	11,20,737	8,83,060	11,20,737
26B. Scientific, etc., Departments	...	...	9,63,100	10,26,692	9,63,100	10,26,692
27. Territorial and political pensions ...	3,13,673	3,09,757	...	...	3,13,673	3,09,757
28. Civil furlough and absentee allowances.	2,065	5,426	...	...	2,065	5,426
29. Superannuation and retired allowances.	27,049	26,592	33,83,557	33,08,195	34,10,606	33,34,787
30. Stationery and printing	4,56,779	4,82,936	14,79,937	14,85,264	19,36,716	19,68,100
32. Miscellaneous	44,426	76,931	4,19,234	4,72,879	4,63,660	5,49,860
33. Famine relief ... { Civil Officers ...	...	...	...	...	...	...
{ P.W. Officers ...	...	...	...	...	...	...
34. Construction of protective railways.	— 19,669	— 2,897	...	...	— 19,669	— 2,897
35. Do. irrigation works ...	3,91,715	3,84,033	...	...	3,91,715	3,84,033
36. Reduction or avoidance of debt ...	...	...	2,50,000	2,50,000	2,50,000	2,50,000
39. Guaranteed companies	...	...	...	...	...	...
40. Subsidised companies	1,71,687	3,09,993	...	...	1,71,687	3,09,993
41. Miscellaneous railway expenditure ...	3,431	32,033	...	...	3,431	32,033
42. Irrigation (major works)—						
Public Works Officers (Working expenses).	12,58,034	11,17,807	12,58,033	11,17,807	25,16,067	22,35,614
Public Works Officers (Interest on debt).	14,93,994	15,07,467	14,93,995	15,07,467	29,97,989	30,14,934
43. Irrigation (minor works)—						
In charge of Public Works Officers.	...	...	37,33,718	32,22,916	37,33,718	32,22,916
Do. Civil Officers	...	...	6,75,937	5,94,044	6,75,937	5,94,044
45. Civil works—						
In charge of Public Works Officers.	2,50,521	3,51,803	83,95,911	63,58,689	86,46,432	67,10,492
Do. Civil Officers	...	...	79,03,879	23,42,358	79,03,879	23,42,358
Total expenditure charged to Revenue ...	97,71,123	1,03,00,020	8,22,78,598	7,67,83,691	9,20,49,721	8,70,83,711
Surplus (+) or Deficit (—)	+ 10,15,93,798	+ 10,82,22,165	— 65,44,416	21,819	+ 9,50,54,382	+ 10,82,00,346
Grand Total ...	11,13,69,921	11,85,22,185	7,57,34,182	7,67,61,872	18,71,04,103	19,52,84,057
CAPITAL OUTLAY ON RAILWAY AND IRRIGATION WORKS NOT CHARGED TO REVENUE.						
48. State Railways	48,90,958	20,72,905	...	...	48,90,958	20,72,905
49. Irrigation works	7,53,336	7,50,444	...	...	7,53,336	7,50,444
Total, Capital outlay ...	56,44,344	28,23,349	...	...	56,44,344	23,23,349
Grand Total (Disbursements) ...	1,54,15,467	1,31,23,369	8,22,78,598	7,67,83,691	9,76,94,065	8,99,07,060

Including the receipts and charges of the Civil and Public Works Departments, but excluding the figures relating to the Army, the Post Office and Telegraph Department, and the Home accounts, as well as those relating to Capital outlay and debt and remittance transactions, the gross revenue amounted to Rs. 19,52,84,057 and was more than that of the previous year by Rs. 81,79,954 ; the gross expenditure charged to Revenue fell by Rs. 49,66,010 from Rs. 9,20,49,721 to Rs. 8,70,83,711 ; these figures are, however, subject to alteration until the Finance and Revenue accounts of the Government of India are finally made up by the Comptroller-General.

Surplus revenue.

331. The surplus amounted to Rs. 10,82,00,346 and was more than that of 1914-15 by Rs. 1,31,45,964, this being due to an increase of revenue by Rs 81,79,954 and a decrease in expenditure by Rs. 49,66,010. The increase was mainly under net State Railway receipts (Rs. 65,33,488) and Land Revenue (Rs. 20,57,743) ; the Stamp revenue also recovered from the set-back it had received, but Excise and Customs revenue declined by

Rs. 15 lakhs and Rs. 8¾ lakhs, respectively. Other variations of importance occurred under Salt (— Rs. 1¼ lakhs), Forests (+ Rs. 1½ lakhs), Scientific and Miscellaneous (+ Rs. 2½ lakhs), and Civil Works in charge of Civil Officers (+ Rs. 1½ lakhs). The increase under net State Railway receipts was chiefly due to the general development of third-class passenger traffic and larger trade movements of food-grains, oil-seeds, raw cotton, and unwrought timber, and to curtailment of expenditure, chiefly under Engineering works, for want of materials. Important variations in expenditure were Civil Works (— Rs. 75 lakhs), Medical (+ Rs. 25 lakhs), Irrigation Major Works (— Rs. 2¾ lakhs) and Irrigation Minor Works (— Rs. 6 lakhs). The subsidies paid to local bodies were for the first time shown in the accounts under the heads of service most closely connected with the object for which each grant was given, instead of under Civil Works, e.g., the grant for the construction of a school appeared under Education, the grant for the construction of a drainage system under Medical, and so on ; the grants paid to local bodies were considerably reduced and this mainly accounted for the decreased expenditure.

Cash balances.

332. The year opened with a cash balance of Rs. 468 lakhs held in the Reserve Treasury, the Revenue Treasuries and the Bank of Madras and its branches, and closed with a balance of Rs. 391 lakhs.

(*b*) IMPERIAL REVENUE AND FINANCE.

General.

333. The receipts on account of Imperial Revenue exceeded those of 1914–15 by Rs. 71,52,264, of which Rs. 65,33,488 were under State Railways ; the improvements under Land Revenue and Stamps were counterbalanced by decreases under Excise and Customs. The net transfer from Imperial to Provincial Revenues was Rs. 7,38,858 less than in the previous year ; the Imperial expenditure charged to Revenue also exceeded that of 1914–15 by Rs. 5,28,897. The incidence of taxation per head of population was Rs. 3-6-7·7 as against Rs. 3–6–6·8 in 1914–15.

Land revenue.*

334. The receipts from Land Revenue amounted to Rs. 6,97,93,650 and were higher than those of 1914–15 by Rs. 20,57,743. The improvement was chiefly in Vizagapatam (+ Rs. ·98 lakh), Cuddapah (+ Rs. 1·28 lakhs), Kurnool (+ Rs. 2·25 lakhs), Chingleput (+ Rs. 1·13 lakhs), Chittoor (+ Rs. 2·64 lakhs), North Arcot (+ Rs. 3·34 lakhs), Trichinopoly (+ Rs. 1·31 lakhs), Madura (+ Rs. 2·73 lakhs), Rāmnād (+ Rs. 1·68 lakhs) and Malabar (+ Rs. 1·52 lakhs), but in Kistna and South Arcot there was a decrease of Rs. ·76 lakh and Rs. 1·48 lakhs. Increased revenue was due to the introduction of resettlement rates in certain taluks in Chittoor and North Arcot, the collection of arrears in Vizagapatam, Chingleput, North Arcot and Trichinopoly and the more favourable character of the season in other districts. The fall in South Arcot was due to the collection in 1914–15 of a portion of the suspended revenue of the previous year, and the inevitable results of a failure of the rains in the cultivation season. The incidence of this taxation per head amounted to Rs. 1–10–11 as against Rs. 1–10–2 in 1914–15, and was highest in the district of Kistna and lowest in Vizagapatam. The expenditure under Land Revenue being entirely Provincial is dealt with in the Provincial section.

Canal revenue.

335. The canal revenue collected during the year amounted to Rs. 2,34,779 and was Rs. 13,789 more than in the previous year

Customs.

336. The revenue under this head is divided into "Sea Customs" and "Land Customs." The receipts under Sea Customs exclusive of import duty on Salt, which was credited to "Salt," amounted to Rs. 76,72,441 against Rs. 85,37,010 in the foregoing year ; import duties fell by Rs. 12·22 lakhs but export duty rose by Rs. 3·37 lakhs, the latter being due to larger exports of rice and the new duty on tea levied from March 1916. The receipts under Land Customs amounted to Rs. 2,77,908 against Rs. 2,85,080 in 1914–15. The incidence of taxation per head of population

* The receipts from LAND REVENUE and the receipts and charges under STAMPS, EXCISE (including the realizations of opium revenue by the Excise Department) and INCOME-TAX are shared equally between Imperial and Provincial. But the comparison made here is in respect of the total figures (both Imperial and Provincial) under these heads.

was As. 3-1 against As. 3-5 in 1914-15. The charges amounted to Rs. 4,19,599 against Rs. 4,14,611 in the previous year.

Opium.* 337. Bengal opium was supplied for consumption from the Government storehouses at Ghazipur at a uniform rate of Rs. 8-8-0 per seer and the value at this rate was credited to "Opium"; the difference between this rate and the selling rate was credited to "Excise." The credit to the former head was Rs. 4,02,759 and the gain on sale-proceeds amounted to Rs. 14,03,223; there was practically no variation on last year's figures, but shop rentals and Miscellaneous revenue credited to Excise rose from Rs. 6,22,851 to Rs. 7,08,720. The realizations of opium revenue by the Excise Department thus amounted to Rs. 21,11,943, and the incidence of taxation per head of population was 9·8 pies against 9·4 pies in 1914-15. The charges were Rs. 3,074 against Rs. 6,531 in the previous year.

Salt. 338. Government and Excise factories were reduced by one in each case to 19 and 44; in Pandraka and Cheyur factories, however, there was no manufacture on account of the existence of large stocks. 9,411,028 maunds of salt were manufactured against the quinquennial average of 10,946,962 maunds. The fall in the outturn was confined to the Central and Southern divisions and was due to heavy rains during the early part of the season, which interfered with manufacture. The salt manufactured under the Excise system increased from 5,664,269 maunds in 1914 to 5,758,862 maunds in 1915 and that manufactured under the monopoly system from 2,471,370 maunds to 3,652,166 maunds. The quantity of duty-paid salt imported by sea from the Bombay Presidency increased from 1,400,307 maunds to 1,536,569 maunds, and that imported by rail from Bombay and Goa from 384,671 maunds to 627,113 maunds. The quantity of duty-bearing salt imported (chiefly from the United Kingdom) by sea fell from 3,978 maunds to 2,823 maunds. The issues for home and inland consumption of salt locally manufactured and imported by sea and rail were 11,346,427 maunds against 12,338,151 maunds in 1914-15. Restrictions were placed on the issues of locally manufactured salt on account of low stocks; the Government of India Salt Ordinance No. II of 1916 also restricted the issues of salt from all factories. 158,000 maunds of powdery salt were exported from the factories of the Tuticorin and Kayalpatnam circles to the Straits Settlements, and 100,000 maunds were removed by the Travancore Darbar from the Tuticorin circle; the salt was issued duty-free in both cases. 320,416 maunds of duty-paid salt were exported to Calcutta and Rangoon. The available stock of Government and Excise salt at the end of the year was 3,652,668 maunds against 4,685,411 maunds in the previous year and the year's revenue realized Rs. 1,15,78,575 or Rs. 1,27,723 less than last year. The incidence of taxation was As. 3-8 as against As. 3-11 in the previous year, and charges increased to Rs. 15,79,370, the increase being chiefly under Purchase of Salt; in the several monopoly factories in the Northern division except Ganjām a higher kudivaram rate was also paid as an inducement to increase the output.

Excise (Abkari).* 339. The Excise revenue amounted to Rs. 3,30,06,815 against Rupees 3,45,94,235 in 1914-15, the decline occurring under nearly all heads; the decrease under country spirits was about Rs. $10\frac{3}{4}$ lakhs and under toddy Rs. $5\frac{3}{4}$ lakhs, and was due mainly to the disturbance of economic conditions. The incidence of taxation per head was As. 12-9 against As. 13-4·3, but the charges increased to Rs. 18,49,413 from Rs. 18,27,208 in the previous year.

Stamps.* 340. Revenue rose from Rs. 1,38,98,284 to Rs. 1,51,01,998, owing to the growth of litigation, the revival of trade, and an expansion in monetary transactions and investments in landed property. The incidence of taxation per head rose to As. 5-10 from As. 5-4·4, but the charges fell from Rs. 4,33,776 to Rs. 4,13,890.

Income-tax.* 341. Receipts rose by half a lakh to Rs. 40,74,656; the incidence of taxation remained unchanged at As. 1-6. The charges amounted to Rs. 60,561 as against Rs. 41,221 in 1914-15.

* *Vide* footnote to page 91.

342. Imperial revenue from other sources amounted to Rs. 3,88,02,369 and exceeded the revenue of 1914–15 by Rs. 65,08,311, the excess being due to the increase in the net State Railway receipts; there were decreases of Rs. 80,052 under Subsidized Companies on account of repayment of advances of interest, and of Rs. 11,166 under Miscellaneous. **Other Imperial receipts.**

343. The decrease in the net transfer to Provincial revenues was chiefly due to the non-recurring assignment of Rs. 7,32,000 to Provincial, adjusted in the accounts of 1914–15, on account of the balance of the Proprietary Estates Village Service Fund. **Transfers between Imperial and Provincial revenues.**

344. The remaining Imperial expenditure amounted to Rs. 71,37,582 and exceeded that of the preceding year by Rs. 3,57,072. The increase occurred chiefly under Assignments and Compensations (Rs. ·80 lakh), General Administration (Rs. ·42 lakh), Subsidized Companies (Rs. 1·38 lakhs), Miscellaneous Railway expenditure (Rs. ·29 lakh) and Civil Works in charge of Public Works Officers (Rs. 1·01 lakhs); but the outlay under working expenses of Major Irrigation Works was less by Rs. 1·40 lakhs, owing to heavy expenditure in the previous year on repairs to flood damages. The increase under Assignments and Compensations was due to the payment of large arrears of Malikhana and other pensions; and of higher compensations under Customs to Travancore and Cochin, and for suppression of ganja cultivation to Travancore: under General Administration, to the reorganization of the Currency Office, and larger expenditure under Salaries and Contingencies in the office of the Accountant-General for advertisement charges on account of the 4 per cent Terminable loan: under Civil Works, to the cost of acquisition of an additional site for the new Currency Office building. **Other Imperial Expenditure.**

345. The capital outlay on State Railways and Irrigation Works not charged to Revenue amounted to Rs. 28,23,349 against Rs. 56,44,344 in 1914–15. The decrease was under State Railways, mostly on the South Indian Railway system, and was chiefly due to contractors in England not being able to complete their contracts on account of the war and restricted shipping facilities. **Capital outlay on State Railways and Irrigation Works not charged to Revenue.**

346. The opening balance on 1st April 1915 was Rs. 1,52,89,081. Rs. 25 lakhs were advanced to the Bank of Madras and Rs. 15 lakhs to the Madras Port Trust. The repayments amounted to Rs. 18,04,140; the chief items were, Rs. 37,337 by the Madras Corporation, Rs. 1,92,583 by the Madras Port Trust, Rs. 25,536 by the Madras Coast Lights Fund, Rs. 15 lakhs by the Bank of Madras, and Rs. 33,891 by the Tanjore District Board Railway. For the repayment of the old loan of Rs. 14,30,000 taken by the Madras Corporation, an instalment of Rs. 28,600 was paid from the Sinking Fund; on the 31st March 1916, this Sinking Fund held Government securities of the face value of Rs. 13,53,500. **Imperial loans.**

(*c*) Revenue and Finance other than Imperial.

347. The Provincial accounts opened with a balance of Rs. 1,10,16,052 on 1st April 1915. The transactions of the year resulted in a net deficit of Rs. 21,819, which was the net result of an aggregate revenue of Rs. 7,67,61,872 and an expenditure of Rs. 7,67,83,691. **Provincial revenues.**

348. The comparison of the total Imperial and Provincial revenues is made in the Imperial section. Charges amounted to Rs. 1,23,54,313 and were less than those of the previous year by Rs. 1,92,945, due to smaller expenditure under Charges of District Administration under temporary establishment and grain compensation allowance, and to larger recoveries on account of estate surveys. **Land revenue.**

349. The explanations given in connection with the variations in the receipts and charges under Stamps, Excise and Income-tax in the Imperial section apply also to the variations in the Provincial section. **Stamps, Excise and Income-tax.**

350. The receipts in the Forest Department amounted to Rs. 41,06,838, and were Rs. 1,65,301 more than in the previous year. There was an increase under Timber, etc., removed by Government agency (Rs. 2·44 lakhs) **Forests.**

and a decrease under Timber, etc., removed by consumers and purchasers (Rs. 1·68 lakhs), the variations under other heads resulting in a net excess of Rs. ·89 lakh ; the increase was mostly under sandalwood owing to better prices being realized in the market and to the fact that a portion of the realizations from the sales of the previous year was credited only in 1915–16. A large number of casuarina plantations were sold in 1914–15 at abnormal rates especially in the Central and Southern Circles and there were no plantations for sale in 1915–16 ; decreased revenue under this head was therefore inevitable. The expenditure amounted to Rs. 29,27,318, which was Rs. 66,633 more than in the preceding year, but included Rs. 1·72 lakhs paid for the acquisition of Mudumalai and Kumbarakolli leased forests on the Nilgiris ; apart from this the ordinary current expenditure was considerably reduced.

Registration.

351. The receipts under Registration were Rs. 23,37,549 against Rs. 22,43,183 in the preceding year. The income from registration fees revived after August 1915 on account of a readjustment of trade conditions. The charges amounted to Rs. 12,55,970, or Rs. 17,615 less than in the foregoing year.

Other Provincial receipts.

352. The Provincial receipts under the remaining heads amounted to Rs. 60,16,556 and were higher than those of the previous year by Rs. 6,02,987. There were increases under eleven heads (+ Rs. 7,49,061) and decreases under five heads (— Rs. 1,46,074) ; the former were chiefly under Courts of Law (Rs. 55,907), Agriculture (Rs. 51,133), Scientific and Miscellaneous (Rs. 2,45,576), Miscellaneous (Rs. 1,34,366), Civil Works in charge of Civil Officers (Rs. 1,58,694) and Civil Works in charge of Public Works Officers (Rs. 35,142), and the latter under Jails (Rs. 1,14,474), owing to a smaller demand for jail-made articles by departments. The increase under Scientific and Miscellaneous was due partly to greater issues of quinine and a rise in its price (Rs. 1·73 lakhs) and to larger Fishery receipts (Rs. ·43 lakh) ; unspent balances of Provincial contributions refunded by the District Boards of Vizagapatam and Cuddapah accounted for the heavier receipts under Civil Works in charge of Civil Officers.

Other Provincial expenditure.

353. The expenditure in the Provincial section under the heads other than those already dealt with amounted to Rs. 5,90,82,621 and was less than that of the previous year by Rs. 53,60,081, which was the net result of decreases (Rs. 85,71,661) under nine heads and increases (Rs. 32,11,580) under thirteen heads. There was a decrease under Civil Works in charge of Civil Officers (Rs. 55·67 lakhs), Civil Works in charge of Public Works Officers (Rs. 20·37 lakhs), Irrigation Minor Works in charge of Public Works Officers (Rs. 5·11 lakhs), Irrigation Major Works, Working expenses (Rs. 1·40 lakhs), and Education (Rs. 1·35 lakhs), and an increase under Medical (Rs. 25·11 lakhs), Agriculture (Rs. 2·38 lakhs), and Courts of Law (Rs. 1·83 lakhs). The decrease under Civil Works and the increase under Medical is explained in paragraph 331. The decrease under Irrigation Minor Works was due to smaller expenditure on tank restoration, and under Education, to curtailment of grants-in-aid. The increase under Agriculture was attributed to the opening of a paddy-breeding station and larger purchase of anti-rinderpest serum : under Courts of Law, to larger expenditure on printing, etc., and revision of the establishments pertaining to the new Judges, the Registrar, the Official Referee, the Bench Magistrate, the Subordinate Judges and District Munsifs.

Provincial loans.

354. The Provincial Advance and Loan Account (including loans to Local Boards for Railway construction) opened with a balance of Rs. 94,54,252 on 1st April 1915, and closed with a balance of Rs. 94,76,881 ; advances amounted to Rs. 9,98,421 and repayments to Rs. 9,75,792. Ryots received advances to the extent of Rs. 7,69,620 as against Rs. 8,57,891 in the previous year. The Madura District Board received a loan of Rs. 44,000 for the construction of a causeway across the Vaigai river and a bridge across the Pambar river. The Coonoor Municipality took Rs. 23,250 out of a loan of Rs. 46,500 sanctioned for water-works improvements. The Vizagapatam, Kumbakōnam and Chidambaram Municipal Councils

were granted loans of Rs. 2,500, Rs. 11,250 and Rs. 24,000, respectively, for extension of water-supply. The Srirangam Municipality borrowed Rs. 54,000 for acquisition of land for opening conservancy lanes. Rs. 14,080 were advanced to the Cochin Municipality for reclamation of the Kalvetti swamp, Rs. 5,300 to the Anakapalle Municipality for survey, and Rs. 50,421 to the Zamindar of Punganur for the survey of his estate. No loans were granted to co-operative credit societies.

Local Funds.

355. The following paragraphs deal with funds raised from special sources and devoted to special objects and not to general purposes of the administration (Imperial and Provincial). The funds comprised under the head "Local Funds" are Local Funds constituted under Act V of 1884, the Irrigation Cess Fund, Port and Marine Funds, and other funds which are mentioned below seriatim.

Local Funds Act V of 1884.

356. The Local Funds constituted under Act V of 1884 opened with a balance of Rs. 86,72,253 and closed with a balance of Rs. 78,32,488. Exclusive of debt transactions, the receipts and charges amounted to Rs. 1,78,70,534 and Rs. 1,95,71,121 showing a deficit of Rs. 17,00,587 against a deficit of Rs. 90,546 in the previous year. This large deficit was due to smaller receipts under "Civil Works" (Rs. 23,21,027), since contributions from Provincial Funds were considerably reduced. There was an increase of Rs. 3,90,695 under Provincial rates due to better collections of cess on land. The net receipts from Railways exceeded those in the preceding year by Rs. 1,48,713, but the outlay on construction was less than in the previous year by Rs. 2,76,667. Under Education the receipts were less by Rs. 1,24,350 and the expenditure larger by Rs. 1,47,469. The receipts and charges on account of debt transactions amounted to Rs. 30,39,222 and Rs. 21,78,399; the District Boards of Coimbatore, Tanjore and Salem obtained loans from the Bank of Madras on the security of their Government promissory-notes for Rs. 7·3 lakhs, Rs. 2·4 lakhs and Rs. 2·7 lakhs, respectively, for railway construction and the District Board, Madura, borrowed Rs. 44,000 from Government. The funded capital of the District Boards, which was Rs. 1,25,52,000 on 31st March 1915, rose to Rs. 1,26,93,000, of which Rs. 97,96,000 represented investments of Railway cess balances and the balance of Rs. 28,97,000 investments on account of endowments, provident funds, and other institutions. The closing cash balance of the Local Boards was earmarked as follows: Railways Cess fund (Rs. 8·06 lakhs), Endowment fund (Rs. 4·01 lakhs), Unexpended amount of special Provincial grants (Rs. 33·75 lakhs) and Debt heads (Rs. 19·78 lakhs). Thus the net balance available for general purposes of the District funds was Rs. 13·04 lakhs only, and the South Arcot, Bellary, Chingleput, Madura, Nellore and Tinnevelly boards closed with deficit cash balances under general funds.

Bhadrāchalam Estate Village Service Fund.

357. The receipts of this fund consisted mainly of the payments made by the proprietors and of the deductions made from the land revenue collections (beriz) of Government villages, no cess being levied from the proprietors on account of the emoluments of village servants. The receipts and charges of the fund amounted to Rs. 9,124 and Rs. 7,234, respectively, against Rs. 10,105 and Rs. 6,875 in the previous year and the fund closed with a credit balance of Rs. 15,546.

Irrigation Cess Fund.

358. This fund exists in the districts of Chingleput, South Arcot, Trichinopoly, Madura and Coimbatore. Owing to the abolition of the cess in the South Arcot district, no collections were made in that district during 1915-16. The fund opened with a balance of Rs. 98,362 and closed with a balance of Rs. 1,02,037. The receipts and charges amounted to Rs. 46,311 and Rs. 42,635, respectively, against Rs. 40,111 and Rs. 38,668 in the previous year.

Port and Marine Funds.

Madras Port Fund.

359. These funds consist of Port Funds (Act XV of 1908), Pilotage Funds (outports), Landing and Shipping Funds, and the Madras Coast Lights Fund. The Port Funds are again sub-divided into Madras and Minor Ports Funds. The Madras Port Fund opened with a balance of Rs. 33,414 and closed with a balance of Rs. 5,584; receipts under Port dues fell off

and increased charges were incurred for the repairs done to the revetment north of the harbour and the maintenance charges of a new steam tug. The income of the fund amounted to Rs. 89,952 and its expenditure to Rs. 1,17,782.

The Minor Ports Fund.

The Minor Ports Fund opened with a balance of Rs. 1,06,921 ; the receipts and charges of the fund amounted to Rs. 5,11,674 and Rs. 4,35,481 respectively. The fund advanced loans of Rs. 20,000 and Rs. 40,000 to the Negapatam and Calicut Landing and Shipping Funds ; Rs. 18,956 in all were repaid towards the principal of the loans taken by the Cochin, Cocanada, Negapatam, and Tuticorin Landing and Shipping Funds. Free grants to the extent of Rs. 47,492 were also made to the Adirampatnam and Tellicherry Landing and Shipping Funds. The security balance at the credit of the fund was Rs. 12,57,400. The income and expenditure of the Pilotage Funds (outports) amounted to Rs. 10,288 and Rs. 10,614 and the funds closed with a balance of Rs. 2,573. Government securities of the face value of Rs. 1,200 were purchased on account of the Pamban and Kilakarai Pilotage Fund ; the invested balance of all the Pilotage Funds amounted to Rs. 1,72,100. The receipts and charges of the Landing and Shipping Funds amounted to Rs. 4,25,168 and Rs. 4,79,685 and the closing balance was Rs. 2,76,317 ; invested balance to the credit of the Funds was Rs. 3,96,400. The balance of loans repayable by the Landing and Shipping Funds to the Minor Ports Fund amounted to Rs. 5,24,244.

The Madras Coast Lights Fund.

360. The Madras Coast Lights Fund opened with a balance of Rs. 65,712 and closed with a balance of Rs. 16,853 ; the receipts and charges of the year were Rs. 94,085 and Rs. 1,42,945. Government securities of the face value of Rs. 23,400 were purchased and the face value of the fund's investments was Rs. 1,23,400.

Cantonment Funds.

361. The receipts and charges of these funds amounted to Rs. 5,19,801 and Rs. 6,11,930 respectively, the result being a deficit of Rs. 92,129, which reduced the credit balance to Rs. 1,05,263.

Cantonment Hospital Fund, Secunderabad.

362. The fund opened with a balance of Rs. 353. The receipts and charges of the fund amounted to Rs. 8,554 and Rs. 8,819, respectively.

Civil Hospital Fund, Secunderabad.

363. The receipts and charges of this fund amounted to Rs. 64,632 and Rs. 56,674, respectively, and the balance to the credit of the fund rose from Rs. 7,480 to Rs. 15,437.

University Fee Fund.

364. The transactions of this fund resulted in a deficit of Rs. 48,685, since two lakhs were withdrawn and placed in fixed deposit with the Bank of Madras ; the cash balance was reduced to Rs. 53,435. The invested balance (Rs. 6·80 lakhs) was unaltered and the total held in fixed deposit with the Bank of Madras was Rs. 3,20,000.

Kumbakōnam College Hostel Funds.

365. The receipts and charges amounted to Rs. 4,818 and Rs. 4,949, and the cash balance to the credit of the fund was reduced to Rs. 902.

Mrs. A. V. Narasinga Rao's College Fund.

366. The receipts and charges of the fund were Rs. 47,192 and Rs. 49,727, and the balance of the fund at the end of the year was Rs. 71,202. There was an invested balance of one lakh.

Vizagapatam Hospital Fund.

367. The fund opened with a balance of Rs. 1,060. The receipts and charges amounted to Rs. 19,684 and Rs. 18,148, and the closing balance was Rs. 2,596.

Hyderabad Residency Bazaar Fund.

368. The fund opened with a balance of Rs. 1,22,137 ; the receipts and charges amounted to Rs. 1,27,252 and Rs. 1,07,636 and the balance was thus raised to Rs. 1,41,753.

Secunderabad Local (Abkāri, etc.) Fund.

369. The receipts and expenditure of this fund were Rs. 8,07,996 and Rs. 7,99,127 ; the balance of Rs. 4,94,933 was increased to Rs. 5,03,802.

MUNICIPAL REVENUES.

370. The receipts and charges of mufassal municipalities amounted to Rs. 79,81,969 and Rs. 85,44,627, respectively, and the balance at their credit fell from Rs. 45,34,594 to Rs. 39,39,875. The receipts of the Madras Corporation amounted to Rs. 36,08,295 and the charges to Rs. 45,30,719. The balance at the credit of the Corporation at the end of the year fell from Rs. 18,50,325 to Rs. 9,27,901.

EXCISE ADMINISTRATION.

General.

371. There were no administrative changes of special importance during the year. The following may, however, be mentioned : the withdrawal of the contract distillery supply system from 28 villages of the Pārvatīpuram Agency of the Vizagapatam district and its extension to five villages of the same Agency ; the extension of the tree-tax system to eight villages in the Golgonda Agency which were under the contract distillery system from 1st April 1914 ; increase of the duty on country spirits in five districts and of tree-tax in two districts ; enhancement of the duty on foreign liquor from Rs. 9-6-0 to Rs. 11-4-0 per proof-gallon and on beer from As. 3 to As. 4-6 per gallon ; the raising of the duty on denatured spirits from 5 to 7½ per cent ad valorem ; the enhancement of duty on ganja and charas throughout the Presidency from Rs. 10 and Rs. 16 to Rs. 12-8-0 and Rs. 25 per seer, respectively ; the abolition of the fixed selling price of opium except in the Agency tracts ; prohibition of the transmission by inland post of cocaine and allied drugs and of opium and its drugs ; and the prohibition of the employment of persons below the age of sixteen in any capacity in excise shops and depots.

Local advisory committees.

372. The Advisory Committee system for determining the number and location of shops was not introduced in any new area during the year.

Country liquor.

373. The system of separate sale of shops remained in force throughout the excise tracts of the Presidency. The number of shops was reduced by 573 ; the rentals fell from Rs. 49·88 lakhs to Rs. 44·32 lakhs and consumption decreased by 9·4 per cent to 1,491,470 proof-gallons, chiefly owing to the dislocation of trade and industries caused by the European war. There was a rise in revenue in the non-excise tracts notwithstanding the fact that in certain tracts the hill tribes are allowed to distil free for bona fide domestic consumption.

Toddy.

374. The number of toddy shops was reduced from 13,169 to 12,447. The rentals fell from Rs. 92·81 lakhs to Rs. 88·94 lakhs and the receipts under tree-tax from Rs. 78·71 lakhs to Rs. 74·23 lakhs. The toddy consumed was calculated to have been roughly 104 million gallons.

Foreign liqour.

375. The quantity of foreign liquor imported by sea during the year amounted to 426,968 gallons, showing a decrease of 18·2 per cent on the previous year's figure : 47·2 per cent of this quantity came under the head "Ale, beer and porter." Over 221,000 gallons of Bangalore beer were imported from Bangalore and the four local breweries issued 580,242 gallons for the Presidency ; Madras, the Nilgiris, North Arcot, Trichinopoly, Chingleput, Coimbatore, Salem and Bellary were the greatest beer-consuming districts.

Opium and intoxicating drugs.

376. The total issues of opium within the Presidency were 37,082 seers against 38,799 in the previous year ; 10,363 seers were issued to Mysore and other States including Coorg and the French Settlements. Six hundred and ninety-seven shops in both the ordinary and Agency tracts were sold or licensed for Rs. 7,06,019 against 740 shops for Rs. 6,21,538 in 1914-15. There was a slight decrease in the retail selling price of opium during the year. The quantity of hemp drugs including preparations of hemp consumed decreased from 49,713 seers to 44,722 seers or by about 10 per cent. The decrease was attributed to one or more of the following reasons : viz., the

enhancement of duty on ganja, the rise in the retail selling prices of drugs and the stagnation of trade owing to the European war. In the ordinary tracts 440 shops were sold for Rs. 5,21,499 against 527 shops for Rs. 4,97,611 in the previous year. In the Vizagapatam Agency seven shops were sold under a modified auction system against the same number in 1914–15, and in the Gōdāvari Agency four shops were assigned on fixed fees against three in the previous year. No shops were opened in the Ganjām Agency. The cultivation of the coca plant was prohibited except under licence and no licences were issued during the year. The rules relating to cocaine and allied drugs were reported to have worked well ; the total quantity imported for use in medicine was 124 ounces and 144 grains.

Offences.

377. There was a decrease of 7·6 per cent in the number of offences against the Abkāri law. The number of cases of illict manufacture of toddy decreased by 4 per cent only, but cases of illicit distillation and possession of illicitly distilled spirits fell by 14·5 per cent and those under smuggling by 16·9 per cent.

CHAPTER VI.

VITAL STATISTICS AND MEDICAL SERVICES.

DETAILS OF CENSUS.

378. *Vide* pages 196 to 205 of the Report on the Administration of the Madras Presidency during the year 1911–12.

BIRTHS AND DEATHS. (1915.)

[*The Fifty-second Annual Report of the Sanitary Commissioner, Madras, 1915; Report on the working of the Births, Deaths and Marriages Registration Act VI of 1886 in the Madras Presidency during 1915–16; Statistics of British India, Part V, Area, Population and Public Health.*]

Population.

379. Exclusive of Europeans and Eurasians who numbered 40,928, the population of the Presidency according to the census of 1911 was 41,829,232. Vital statistics were only furnished, however, for a population of 40,005,735, since the hill tribes of the Ganjām and Vizagapatam districts, and the inhabitants of the Laccadive Islands, and the Banganapalle and Pudukkōttai States were excluded, there being no facilities there for recording vital statistics. The estimated population for the year 1915 was 43,468,597. Emigrants to Fiji, British Guiana, the Straits Settlements, Burma and Ceylon numbered 380,339 ; they exceeded the immigrants by 102,976.

Registration.

380. Registration of vital statistics was generally very backward in the rural tracts, since there was no legal compulsion on the part of residents to report cases of births and deaths. The Madras Registration of Births and Deaths Act was in force in 2,348 villages and 309 unions only, which formed a very small fraction of the total number.

Births.

381. The births registered were 1,249,434, showing a decrease of 90,734 on the previous year. Reckoned on the census population of 1911 the birth-rate was 31·2 per mille for 1915 and 33·5 for 1914 ; in 1915 it was less than the decennial average by 0·8 per mille. It was highest in Guntūr (37·6 per mille) and lowest in Rāmnād (21·9 per mille). Compared with the previous year, higher birth-rates were recorded in four districts (Chittoor, Cuddapah, Madras and North Arcot), all other districts excepting Bellary showing a lower rate. Births fell off by more than 5 per mille in three districts (Ganjām, Kistna and South Canara), the deficiency being most marked in Ganjām (— 8·0). There were 104·5 male births for every 100 female births. Muhammadans as usual returned the highest birth-rate of 34·5 per mille, but the general decrease was equally shared by all communities. In the 203 rural towns containing over 5,000 inhabitants there were 53,777 births against 59,386 in 1914. The municipal birth-rate exceeded the rural rate by 4·1 per mille, which is probably explained by the better registration in municipalities ; in 23 towns it increased and decreased in 39.

Deaths.

382. Deaths numbered 879,950 against 998,267 in 1914 ; these figures represented annual ratios of 22·0 and 25·0 per mille against the decennial average of 24·0. The general decrease was due to fewer deaths recorded under cholera, small-pox and fevers. The infantile death-rate for the

districts fell by 9·9 to 186·6 per mille of registered deaths ; in municipal areas it averaged 238·9 per mille against 261·8 in 1914. The mortality among male infants was much higher than among female infants ; in every 100 deaths, there were 54 males and 46 females. It was not possible to assign exact and cogent reasons for the existing abnormal variations in these infantile mortality rates. While the rates in West Coast towns were in the neighbourhood of 100 per mille, in Guntūr, Bezwada and Bellary they were over 335 per mille. No doubt there are many causes contributing to high rates of mortality, the chief being the insanitary condition of villages and houses, the ignorance of the people in matters connected with pregnancy and childbirth and their unwillingness to adopt more enlightened methods, and the insufficient protection of infants against small-pox. Again in towns where plague is an yearly visitant, the migration of the poor classes from place to place on account of the disease and the consequent hardship and inconvenience to which they are put, result in the undue exposure of their infants and contribute to high infantile death-rates. In rural towns where the general death-rates were very low, it was more probably due to the neglect of registration work than to the exceptionally salubrious nature of the localities. Deaths registered in municipalities during the year numbered 85,643 against 98,096 in 1914, representing annual ratios of 32·3 and 37·4 per mille, respectively, against the quinquennial average of 34·5 per mille. The highest death-rate was returned by Hospet (60·3), the other towns showing comparatively higher rates being Bellary, Tiruppattūr, Coimbatore and Salem ; in Salem and Hospet this was due to the prevalence of plague.

Chief diseases.

Cholera.

383. From cholera there were 30,098 deaths making a ratio of 0·8 per mille, which was less than half the number of deaths in 1914, or the quinquennial average (1·4). The incidence of cholera mortality was heaviest in the months of January and February ; it visited 46 municipalities and was most prevalent in Tiruppattūr, Tinnevelly, Madura and Mannārgudi. The three reserve parties of Sanitary Inspectors worked in 12 districts, checking the spread of cholera in rural tracts. During the Chitrai festival and the Cattle fair in Madura town during the latter part of April 1915, a cholera party was deputed to the Madura district exclusively for cholera duty in the town. The mortality from cholera in the 27 municipal towns (including the City of Madras) which have a protected water-supply has been continuously on the decrease ; in other places the use of permanganate of potash in wells gave some protection.

Small-pox.

There were 24,038 deaths from small-pox, 3,851 less than in 1914. The disease was present in all the districts, and the death-rate was above one per mille in Gōdāvari, Kistna and Nellore, and only 15 municipal towns escaped altogether. In urban areas where vaccination is generally compulsory, the death-rate was 0·7 per mille against 0·6 per mille in rural tracts.

Plague.

The deaths from plague fell from 5,102 to 3,889 ; 11 districts were completely free from the disease, which was present all the year round in Salem and South Canara. Indigenous cases of plague occurred in 11 towns, the death-rates being largest in Hospet, Salem, Karūr and Adōni.

Fevers. Dysentery and diarrhœa.

384. There were 290,228 deaths from fevers against 307,620 in 1914. 61,057 deaths were registered under dysentery and diarrhœa, Madras heading the list, as usual, with a mortality rate of 8·2 per mille ; the rates were also high in the Nilgiris, Chingleput, Coimbatore and North Arcot. An enquiry is to be made into the prevalence of the hookworm disease which is responsible for many deaths now attributed to dysentery.

Europeans and Eurasians. (1915-16.)

385. The statistics given above do not include Europeans and Eurasians. In this class, there were 749 births, 420 in Madras and 329 in the mufassal, and 543 deaths. This was the total number registered, but there was more than a suspicion that the returns from mufassal municipalities included cases that should be put down under the head of Indian Christians. In consequence of the withdrawal of the marriage licence powers granted to German missionaries, the number of licensees declined from 742 to 693. There was a large increase—mainly among

Roman Catholics—in the number of marriages contracted by European Christians, the number rising from 334 to 498. Owing to the fact that deaths were reported by municipal authorities and burials by ministers and priests, there were 847 burials recorded against 543 deaths. Fever was the most common cause of death, and after that dysentery and heart disease ; the next most deadly enemy of the European in India was apparently old age.

EMIGRATION AND IMMIGRATION. (1915.)

[*G.O. No. 952, Public, dated 16th May 1916 ; Statistics of British India, Part V, Area, Population and Public Health—Emigration.*]

Regulated.

386. Emigration to Fiji continued till July 1915, and three joint shipments from Madras and Calcutta were made during the period, the number despatched from Madras being 1,115. Recruitment for British Guiana began on 7th July 1915 and continued till the end of September 1915, during which period two shipments were made from Calcutta and Madras jointly, 737 persons being despatched from Madras. The due proportion of women was maintained in respect of emigrants sent to Fiji and British Guiana, the deficiency in respect of the Madras shipments being made good by an excess number of women shipped from Calcutta. Recruitment for Trinidad continued, but no shipments were made during the year. There was no emigration to Mauritius or Seychelles. The management of the depots during the year was good and the emigrants were well cared for. The Protector of Emigrants saw the process of medical inspection, the cooking arrangements, the provision for food, clothing and bathing and latrines, and was satisfied that the work was carefully done and supervised. Emigrants generally appeared happy and cheerful and the greatest latitude was allowed to them to go away if they were disinclined to emigrate after further consideration. 3,217 emigrants returned from Natal in six shipments, 73 from Fiji, and 207 from Mauritius, in each case in a single shipment. As in previous years, there was no emigration to the French Colonies.

Non-regulated.

387. The increase in the number of passengers to the Straits Settlements was due to the revival of the demand for labour in the Malay rubber estates and high price of food-grains. Of those proceeding to Burma and Ceylon, it was impossible to distinguish genuine emigrants from ordinary passengers. The increase in the number of passengers to Burma, which occurred chiefly in the districts of Ganjām, Vizagapatam and Gōdāvari, was due to the re-opening of several mills in Burma which were closed for a time at the outbreak of the war. Emigration to Ceylon also increased.

MEDICAL RELIEF. (1915.)

[*Annual Returns of the Civil Hospitals and Dispensaries in the Madras Presidency for the year 1915; Statistics of British India, Part V, Area, Population and Public Health—Hospitals.*]

Institutions.

388. Although only two new dispensaries were opened during the year, viz., a malaria dispensary at Purasawalkam and an ordinary dispensary at Gazilbadi (Ganjām), several dispensaries that had been closed during the previous year were reopened and the number of working Local Fund and private aided institutions rose from 530 to 541. There were also 44 police hospitals, 53 private institutions, 13 dispensaries belonging to other departments and 48 institutions controlled by railways. The police hospital at Chingleput was closed under the orders of the Inspector-General of Police. The South Indian Railway opened two new dispensaries, one at Mettupālaiyam and another at Dhanushkodi. A newly opened private institution was the Leper Asylum at Manamadura,

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Rāmnād, with accommodation for 48 persons. The Good Samaritan Hospital for Women and Children at Chicacole, which was closed in 1914, was reopened. By the conversion of dispensaries into hospitals 34 more beds were available, and at the end of the year there were 3,325 beds for males and 2,668 beds for females.

Relief.

389. At the Government General Hospital a marked reduction in the number of Europeans and Eurasians and non-caste patients was balanced by an increase in the number of Hindu and Muhammadan patients. This was partly attributable to the absence of the British regiment and their families in the Fort. A large number of children were attending the out-patient department where treatment could not be successfully carried out in many cases. To remedy this a children's hospital in the city is very necessary. The total treated in mufassal institutions showed an advance of 57 per mille on the figure of the preceding year. Taking both classes of institutions together, 66,754 in-patients and 6,702,177 out-patients were treated. There was a noticeable increase in the number of male out-patients who obtained their relief by sending friends for their medicine.

Diseases.

Cholera prevailed to some extent in the Northern, Central and Southern divisions, but the number treated was less than one per mille of the total in each division. Some cases of plague were treated in the Deccan districts and the districts around Madras. Admissions to the wards for small-pox numbered 219, of whom 190 were protected by vaccination, three by previous attack, and 26 were unprotected; the deaths among these groups numbered 9, 2 and 15, respectively. Of those treated as in-patients 79·4 per cent were discharged as cured or relieved. The death-rate was 4·54 or slightly less than that of the previous year, and varied from 54·68 under cholera to ·33 under rheumatism. 282,167 operations were performed on 279,653 patients ; the increase was very marked over last year's figures in the less serious daily occurring operations, such as incisions for boils and abscesses, extraction of teeth, etc.

Finance.

390. Rs. 9,51,649 were spent on medical relief in the City of Madras. Government contributed Rs. 7,29,551, the Corporation gave Rs. 1,32,421, the public subscribed Rs. 12,802, and the balance accrued from Local Fund contributions and miscellaneous receipts. The expenditure on buildings and repairs was Rs. 85,322 as contrasted with Rs. 2,18,529 in the preceding year, and saving was also effected in the expenditure of European medicines and on diet. Omitting the outlay on diet, buildings and investment, the cost of relief per head was Rs. 1–13–7. The expenditure in the mufassal institutions was Rs. 22,28,593 ; Government contributed 17·17 per cent of the expenditure and 77·56 per cent was borne by Municipal and Local Funds. Calculated as for the city each patient cost As. 3-6 and the average cost per diet was nearly As. 2–7.

Effects of the war.

391. All the Indian Medical Service officers in the city were doing duty in more than one charge ; they numbered ten at the end of the year. Three others were in administrative charge of the Vizagapatam, Madura and the Nilgiri districts, and two retired officers, re-entertained, were in charge of Kistna and Coimbatore districts. The Malabar district charge and the Coonoor Civil Surgeoncy were held by private medical practitioners specially appointed. Civil Surgeons and Assistant Surgeons were in administrative charge of all other districts and Civil Surgeoncies, except one which was held by a Military Assistant Surgeon.

Medical College, Madras. (1915-16.)

392. The eighty-first session of the college began on the 2nd July 1915 and terminated on the 31st March 1916. There were two changes in the staff, due to the reversion of officers to military duty. The strength of the college rose from 419 to 425, but the number of new admissions fell from 141 to 127. The decrease was due mainly to the fall in the number of admissions to the Chemist and Druggist and Sanitary Inspectors' classes. There were two students in the B.S.Sc. class, both detailed by the Mysore Administration. As the examination is now recognized as qualifying for the post of first-class health officer, the class will no doubt attract a large number of students. There were 285 students

attending the three classes and the daily attendance was 257, which was satisfactory. At the final University examinations the highest percentage of passes was obtained in the Final L.M. & S. (old); seven were examined and all but two passed. In the Final L.M. & S. under the new system success was not so easily obtained, for only 20 out of 38 secured passes. It is not possible to institute comparisons in regard to the numbers that passed in the various groups in other years since the majority of students were examined under the new regulations which have only been in force for two years. However, taking all the examinations together this year there were 166 passes out of 274 candidates, yielding a percentage of 60·5 against 53·3 in the previous year, when the number of candidates was extraordinarily high, being as many as 360. The present percentage of passes is the highest recorded for five years. The percentage of passes at the final examination was also high, being 48·6 as compared with 43·2 and 34·5 in the two preceding years. It is also satisfactory to note that at the referred examinations of October 1914, out of 27 candidates who appeared for the examination for M.B. & B.S. or L.M. & S. 23 came out successful showing a percentage of 85·18, which is very creditable. The large fall in the number of admissions in the Chemist and Druggist department is very unsatisfactory and the continuance of this class beyond July 1917 is doubtful.

393. There were 36 women students at the college, 12 Europeans or Anglo-Indians, 20 Indian Christians and 4 Hindus. 24 were in receipt of Dufferin stipends and 8 held other stipends. 14 were in the M.B. & B.S. class, 21 in the Apothecary class and one in the L.M. & S. class. In view of the generous contribution made by Government in providing scholarships for female students studying for medicine and in giving grants-in-aid to local bodies employing lady medical subordinates, many more women students will, it is hoped, take up medicine as a profession. The desirability of having a separate Medical College for women was under consideration. The Madras Government College for Women and the Madras Women's Christian College which have recently been started and which are reported to be very popular will, it is hoped, soon supply women of the required standard of education. Women students.

394. In athletics the students were not so successful as in former years. The college, however, maintained its tradition in winning the Travancore Challenge Shield which they had lost the year before. Sports.

395. During the year 1915–16 there were 444 pupils on the rolls of the three Medical schools. The results in the final examinations were not so satisfactory as last year. The receipts of the three Medical schools amounted to Rs. 10,798 and the expenditure to Rs. 73,016. The rules regulating the training and examination of Sub-Assistant Surgeon pupils were recently revised and brought up to date to suit modern conditions. It is hoped that more candidates will avail themselves of the opportunity for medical education thrown open to them and pass out of the Medical schools, thus increasing the supply of medical practitioners of the Sub-Assistant Surgeon class. **Medical schools.**

THE PASTEUR INSTITUTE, COONOOR.

(1ST MARCH 1915 TO 29TH FEBRUARY 1916.)

396. The number of patients treated in the Pasteur Institute during 1915–16 was the highest on record (1,490). This year the increase occurred entirely among Indians and may be attributed to a more widespread knowledge of the work of the Institute. Even so, it is practically certain that the rural population either do not know of the Institute or do not care to come to it. It is calculated roughly that only 2 per cent of the persons bitten by rabid dogs in the Presidency come for treatment. Some persons, however, know the Institute too well and the grant of free travelling and maintenance to indigent persons and their attendants was

considerably abused, since attending so-called patients up from the plains became a means of livelihood to a few. Only 111 Europeans and Anglo-Indians came for treatment against 167 in 1914–15. The percentage of deaths among the patients was ·67, being nearly 50 per cent lower than in the previous three years. The number of failures, that is to say, the number of patients who died when fifteen days had elapsed after the close of the treatment, was seven ; during the last ten years the percentage of such cases has usually been about ·6 or ·7, but this year it was as low as ·47. 142 patients came for advice but were not treated when it was found that they had run no risk of infection. The receipts during the year were Rs. 28,132 and the expenditure rose from Rs. 18,877 in 1914–15 to Rs. 20,248. The Institute had a closing balance of Rs. 20,366.

LUNATIC ASYLUMS. (1915.)

[*G.O. No. 858, Public, dated 4th May 1916 ; Statistics of British India, Part V, Area, Population and Public Health—Lunatic Asylums.*]

397. There is in the Presidency accommodation for 978 lunatics in the asylums at Madras, Calicut and Vizagapatam. During the year twelve small rooms at Madras were converted into six rooms, and four new rooms were constructed at Calicut. No alterations were made at Vizagapatam. Admissions and readmissions numbered 268. The daily average of patients fell from 812 in 1914 to 799·47 ; this is, however, hardly a criterion of the lunacy in the Presidency since barely 9 per cent of those returned as insane in the census report receive medical treatment as against 79 per cent in England, and this number again is only a fraction of the total number of mentally deficient. Only five persons, one being a woman, entered the asylum as voluntary boarders under Act IV of 1912. Of those under treatment 8·87 per cent were discharged as cured, 3·68 as partially cured, and 7·83 died. The daily average of sick was 103·15. This and the high death-rate show clearly that it is mostly the aged and infirm lunatics that find their way into the asylums and not those who have still power to work with their hands. Dysentery was the most prevalent disease. 42 criminal lunatics were admitted, of whom 16 had become insane during their imprisonment and 18 had been held incapable of making their defence. Two criminals were transferred to the Penitentiary and ten to the civil section ; eleven recovered, of whom ten were discharged to stand trial ; one had improved and was handed over to his relatives on bond. Two civil Indian males escaped at Madras and five others at Calicut. One of each group is still at large. The net expenditure increased by about Rs. 6,000 to Rs. 2,46,630 ; this was chiefly due to increments given in salaries and pay.

SANITATION. (1915.)

[*The Twentieth Annual Report of the Sanitary Board (1915), the Fifty-second Annual Report of the Sanitary Commissioner (1915), and the Twenty-sixth Annual Report of the Sanitary Engineer, Madras (1915).*]

Sanitary Board.

398. The functions of the Sanitary Board underwent no change, being as heretofore confined to advising local boards, municipalities and the Government on questions of water-supply, drainage, hospitals, etc. The Board issued standard designs for sewage purification arrangements, a ward for contagious diseases or cholera, scavengers' huts, and a small out-patient dispensary. Thirty-two schemes were approved at a cost of Rs. 12·13 lakhs ; of these, 24 schemes costing Rs. 10 lakhs were

on behalf of municipalities. One work, a small water-supply scheme for the town of Dharmavaram, was completely executed and five more costing Rs. 60,740 were in progress. None of these schemes cost more than Rs. 18,000, that being the estimated cost of building scavengers' huts at Vellore. Work was much hampered by lack of funds and five schemes costing Rs. 66,300 were kept from execution for that reason.

399. Chidambaram was the only town this year in which a piped water-supply was newly installed ; in the matter of drainage there was no appreciable progress. The execution of the Madura and Vellore drainage works, which are large schemes, continued. In the matter of minor sanitary improvements to water-supply and drainage, municipal councils showed considerable activity by providing their towns with protected wells, improving wells, tanks, etc., and by constructing and improving drains where they were needed. The quarterly analysis, of municipal pipe-water supplies, previously made at the King Institute, was stopped temporarily. Health Officers were sanctioned for ten municipalities, but no appointments were made in the year. Conservancy matters generally received a fair amount of attention. The staff employed for the removal and disposal of rubbish and night-soil showed an increase in the aggregate, although in individual municipalities serious deficiencies still existed. The conservancy plant also improved both in numbers and quality ; there were 1,798 public latrines in 1915 as against 1,685 in 1914 ; but it was regrettable that the number of enclosures also rose from 216 to 304. The type-designs issued by the Sanitary Board were found to be defective, and simpler forms were issued for trial in certain selected municipalities. The private scavenging system was in force in all municipalities and the percentage of private latrines cleaned by municipal agency rose from 84·1 in 1914 to 86·1, but over 60 per cent of the houses assessed to the tax on buildings were still without private latrines. In sewage farming, no progress worth the name was noticeable ; no previous treatment was attempted except in Ootacamund and Kumbakōnam ; in Chingleput bacterial filters were under construction. The effluent from the septic tank in Ootacamund was regularly analysed for some time and the results were fairly satisfactory. Financially the sewage farms in most cases were disappointing ; in Vizagapatam and Tanjore, however, a considerable income was derived and the Ootacamund farm was very nearly self-supporting. Except in Madras, Cocanada, Tuticorin, Bellary and Cannanore, where the trenching ground was cultivated, little enterprise was shown in the matter of raising crops on the lands trenched with night-soil, though crops sown under these conditions grow luxuriantly. The allotment for sanitation in 1915 was less than in the previous year, but a far larger percentage was utilized (85·9 per cent against 66·2 per cent). No less than 37 towns failed to spend a fair share of the allotment during the last nine months of the year. The expenditure on the improvement of water-supply amounted to Rs. 3,14,851 and that on conservancy to Rs. 8,83,857, or 92·8 per cent and 70·6 per cent, respectively, of the allotment under these heads. Considerable interest was aroused in and an additional impetus given to the question of town-planning by the visit of Professor Geddes. It formed the subject of reports by Messrs. Lloyd Lancashire and Lanchester, who overhauled the various schemes which the municipal councils had on hand. Beyond petty improvements to water-supply, such as the construction and repair of wells, tanks, markets, slaughter-houses, latrines, drains, etc., and the improvement of village-sites, no sanitary works of any magnitude were carried out. The allotment for sanitary purposes by all District Boards amounted to Rs. 14,46,771 and the expenditure during the nine months was 48·5 per cent of the allotment, which meant that more than 50 per cent of the allotment had lapsed ; in eleven districts the expenditure on sanitation fell below 50 per cent. Of the total sanitary allotment Rs. 4,19,239 were set apart for the improvement of water-supply and Rs. 5,63,183 for conservancy, but the expenditure under these heads was only Rs. 1,94,289 and Rs. 3,82,627. In the Nellore

Sanitary Commissioner.

District Boards.

and Rāmnād districts the water-supply schemes for Gudur and Rāmēswaram were under execution. 1,144 villages were conserved during 1915 as against 582 in 1914, of which 958 were unions and 186 other villages; this was a notable increase and showed that improvements in sanitation were not being confined to the larger towns but were being adopted by villages also.

Sanitary Engineer.

400. There were nineteen works in course of execution, of which the Chidambaram water-works were completed. This was constructed to provide 450,000 gallons per diem to the town the population of which is 21,000. Water is taken from the channel four miles distant and filtered mechanically, and a tank will store sufficient water for the use of the town during the $3\frac{1}{2}$ months when the channel is closed. The works cost Rs. 4 lakhs, Rs. 1·30 lakhs being given by the public-spirited Chairman of the Municipality. Eight water-supply and drainage schemes costing Rs. 40 lakhs were prepared and forwarded for sanction, and 362 minor sanitary estimates were received, of which 287 estimates of a total value of Rs. 11·10 lakhs were sanctioned by the Sanitary Engineer under the powers vested in him, and 39 estimates of the value of Rs. 8,81,176 were scrutinized and submitted to the Sanitary Board. Four type-designs for an iron latrine were prepared and 112 type-designs were available, although many of these from a standpoint of cost and economy were useless except for large towns. Constant inspection was carried out in connection with the maintenance of municipal water-works, of which there are now 26 in operation in the Presidency. It must be admitted that the condition of the water-works and other plant is creditable to the councils concerned, especially considering that some of the pumping machinery has now been in use for nearly 25 years. Schemes were complete for constructing a water-supply to Palni, Chicacole and Tuticorin, and for improving the supply at Tanjore, Salem, Conjeeveram and Cuddapah. Revised plans for an open drainage scheme costing Rs. 12·5 lakhs at Trichinopoly were ready. Schemes were under preparation for a water-supply at Cuddalore and Bellary and for drainage works at Negapatam, Bezwada, Ellore, Kurnool, Chingleput, Salem, Adōni, Kumbakōnam and Vellore. Many other water-supply and drainage schemes were also under investigation. The filtration experiments were continued at Guindy, and a new Mather and Platt mechanical filter was erected, from which useful results were obtained ; it was found that 600 gallons might be passed through a square yard per diem without affecting the filtration adversely, although the standard rate in the Presidency is 450 gallons. In connection with the work of improving village wells, 721 pumps with fittings were distributed to district boards.

VACCINATION. (1915–16.)

[*Annual Report on Vaccination in the Madras Presidency and on the work of the Vaccine Section of King Institute of Preventive Medicine, Guindy, for the year 1915–16; Statistics of British India, Part V, Area, Population and Public Health— Vaccination.*]

401. A regrettable feature of the year was the general low percentage of success obtained with the vaccine prepared at the Guindy Institute, which was partly attributable to the general carelessness on the part of vaccinators who kept fresh lymph unused too long. The lowest success rate was recorded since 1904–05 and in August it fell below 80 per cent. Fortunately after September a marked improvement took place which was well maintained right up to the end of March. The cause of this sudden improvement was as obscure as that of the previous bad results. The percentage of success from lanoline lymph was 87·2 against 90·5 in Local Fund areas and 91·8 against 92·0 in municipalities. The total

vaccination work performed by all agencies was 1,532,185 primary vaccination and 268,985 re-vaccination cases, which showed an increase of 112,248 over the figure of 1914–15 under both heads. The notable increase of 92,578 cases in the re-vaccinations was a sign of appreciation by the people of the benefit of re-vaccination during epidemics of small-pox. The vaccine supplied by the Institute for the first time exceeded two million cases ; as usual the bulk was made up with lanoline ; but glycerinated vaccine was supplied to Madras City and to Colombo. There was a large increase in infantile vaccination in Malabar, Ganjām and Rāmnād. The average cost of each successful case fell from As. 3-10 in 1914–15 to As. 3–9 ; it varied from As. 2–3 in the Malabar and Vizagapatam districts to As. 5-11 in the Chingleput district, excluding the Nilgiris where it was As. 13–1.

CHAPTER VII.

INSTRUCTION.

GENERAL SYSTEM OF PUBLIC INSTRUCTION.

402. *Vide* pages 213 to 228 of the Report on the Administration of the Madras Presidency during the year 1911–12.

EDUCATION. (1915–16.)

[*Report on Public Instruction in the Madras Presidency for 1915–16; Statistics of British India, Part VII—Educational.*]

Staff.

403. Pending the issue of final orders on the scheme of reorganization of the inspecting agency, sanction was granted for the retention of the 49 temporary ranges for another year and for the establishment of an additional girls' range in the southern circle for a year. Sanction was also accorded for the employment of a lecturer in needlework and dress-making in European schools and an additional lecturer outside the cadre of the Provincial Educational Service at the Kumbakōnam College for a year and for an additional professor at the Presidency College for three years to relieve the Principal of some of his lecturing work. The Government approved of the opening of a second-grade college at Anantapur to meet the long-felt want of the Ceded Districts. A contribution of Rs. 1,000 was made towards the cost of publishing the Uriya dictionary prepared by the Senior Uriya Pandit of the Parlākimedi College.

Rules and Codes.

404. The following were important changes sanctioned in the Madras Educational Rules and the Grant-in-Aid Code: (i) The institution of a special examination for bona fide teachers who had failed in the Matriculation examination with a view to determine their eligibility for admission to a secondary training class. (ii) The addition of a provision authorizing Inspectors of Schools to lengthen the period of training in training schools in certain contingencies and in the case of students who having failed in the preliminary examination for Teachers' Certificates seek re-admission with a view to improve their chances of passing at a second attempt. (iii) The raising of the sanctioning power of the Director with regard to furniture and other special grants from Rs. 1,000 to Rs. 2,500, and that of Inspectors from Rs. 50 to Rs. 100, the power of the latter officers being restricted to elementary schools. (iv) The raising of the maximum amount of grant that might be sanctioned for village school-houses and for equipment from Rs. 100 and Rs. 50 to Rs. 250 and Rs. 100, respectively.

General statistics.

405. Public institutions rose from 29,083 to 30,474 and in strength from 1,417,840 to 1,491,945, the increase amounting to 4·8 and 5·2 per cent, respectively, against 3·4 and 5·4 per cent in the previous year; the increase in the number of scholars did not keep pace with that in the number of schools. Private institutions, on the other hand, fell from 4,750 with a strength of 125,115 to 4,609 with a strength of 123,214. Taking the institutions of all classes and grades together, there was an accession of 3·7 per cent to their number and 4·7 to their strength against 3·0 and 5·0 per cent, respectively, in the previous year. The proportion of boys and girls in all institutions to the population of school age also increased from 40·8 and 9·4 to 42·6 and 9·9 per cent, respectively, and this numerical progress was shared by all the four main classes of the community including Europeans and Eurasians.

406. The expenditure on education rose from Rs. 193·5 lakhs to Rs. 205·5 lakhs, which included an expenditure of nearly Rs. 11 lakhs relating to professional colleges and special schools not under the control of the department; thus the expenditure on education increased by Rs. 2 lakhs only and to the total, public funds contributed 51 per cent. The direct expenditure on education rose by Rs. 5 lakhs to Rs. 135 lakhs. The expenditure on arts colleges increased by about Rs. 1 lakh, that on secondary schools by Rs. 2·5 lakhs and that on elementary schools by over Rs. 2 lakhs. The total indirect expenditure decreased from Rs. 63 lakhs to Rs. 60 lakhs. The most noticeable variations were under "Buildings" which decreased by more than Rs. 4 lakhs and under "Miscellaneous" which increased by Rs. 1·5 lakhs on account of expenditure on hostels and boarding-houses. The Imperial grants, both recurring and non-recurring, amounted to Rs. 21 lakhs; two recurring assignments, Rs. 80,000 for the improvement of aided secondary schools and Rs. 30,000 for the extension of education among the poorer classes of the domiciled community in the City of Madras, were fully spent. Out of the recurring grant of Rs. 30,000 for the improvement of Muhammadan education only Rs. 10,000 were spent as the schemes had not fully matured, and it was impossible to utilize the total amount available. Lastly, the recurring assignment of Rs. 16·30 lakhs was fully spent, nearly Rs. 12 lakhs being devoted to elementary education; a large portion of the grant was placed at the disposal of the district boards and municipalities. The main objects of expenditure were the payment of increased teaching grants to aided elementary schools, increased rate of Provincial stipends in training schools, extra capitation allowances and enhanced salaries to the staffs of local board and municipal schools. **Finance.**

407. It was resolved by the Syndicate to continue the system of moderation of marks of the Secondary School leaving Certificate Public Examination held in March 1916 on the principle adopted in 1915–16, and to consider as qualified for admission to colleges those candidates whose final marks so moderated were not less than the Presidency average in the final examination in each of the three subjects of group A and in any two of the subjects of group C. A preliminary list of all the secondary school-leaving certificate holders who were declared eligible for admission to University courses of study in 1916–17 by a special committee and by the Educational authorities of the Native States was also printed and issued to all affiliated colleges in June 1916. The Sir Subrahmanya Ayyar lectureship of 1916 was offered to M.R.Ry. Diwan Bahadur L. D. Swamikannu Pillai Avargal, Registrar of Co-operative Credit Societies, and he delivered two lectures in Madras in March 1916. The B.S.Sc. Degree of the Madras University was recognized as a qualification for Health Officers of the first class. **University and College education.**

408. The results were poor in the various University examinations, both in the Intermediate Examination in Arts and in the B.A. (Honours) examination under the Transitory Regulations, the percentage of passes being 26·3 and 25·7, respectively; in the other Degrees, both arts and professional, the results were satisfactory. In the Oriental title examination, 21 passed out of 28 examined, 19 of the successful candidates being Brahmans and the remaining 2 non-Brahman Hindus. **Examinations.**

409. The number of first-grade colleges rose from 11 to 13 in consequence of the opening of B.A. classes in the Findlay College, Mannārgudi, and the establishment under the management of the United Free Church Mission of a Women's Christian College; and the number of second-grade colleges fell from 21 to 20. There were in arts colleges 8,378 students, or 219 more than in the previous year, of whom 393 were undergoing the B.A. (Honours) course. In the three professional colleges under the control of the department, viz., the Law College, the College of Engineering, and the Teachers' College, there were 472, 491 and 111 students, respectively. In the College of Engineering instruction was started in Electrical Engineering. **Colleges.**

Secondary education.

410. Secondary schools numbered 340, showing a net increase of seven; their strength rose from 123,140 to 130,353 and the staff of teachers was proportionately increased ; of the eight new schools that were opened, one was at Karaikudi in the heart of the Chettinad. The number of complete secondary schools rose from 159 to 165 and six more schools were nearly complete, five of them containing forms up to and including the fifth. The pupils reading in the three highest forms increased by 8·3 per cent. 5,276 secondary school-leaving certificates were completed and 3,195 candidates took a supplementary course in order to improve their certificates. The changes in the secondary school-leaving certificate scheme for improving the study of languages were not brought into effect as the revision of the syllabuses and the arrangements for text-books in vernacular were not ready. The direct expenditure on secondary schools rose from Rs. 33 lakhs to Rs. 35·7 lakhs ; to the increase, aided schools contributed Rs. 2 lakhs and the board schools the remainder. Out of the recurring Imperial assignment of Rs. 80,000, over Rs.56,000 were given as extra teaching grant towards the loss of fee income foregone on account of Muhammadans, Uriyas, girls and pupils of backward classes and castes and about Rs. 24,000 as additional teaching grants to secondary schools. The average cost of educating each student was Rs. 27-9-11 and each pupil paid an average fee of Rs. 20-2-10.

Elementary education of boys.

411. The number of public elementary schools for boys increased from 26,905 to 28,151 and of pupils from 1,143,995 to 1,201,273 or by 5 per cent ; this represented the usual annual rate of progress. The rate of increase was decidedly marked among schools with standards above the fourth. More than half of the new schools with standards above the fourth were under public management, and this was due to the removal of the disability under which formerly capitation allowances could not be earned for pupils in this class of schools. Municipal councils and local boards opened 19 and 108 schools, respectively. The percentage of boys in elementary schools to the male population of school age rose from 32·7 to 34·3. The number of teachers in public elementary schools increased by 2,427, and of the whole number employed 33 per cent were trained. 676 new buildings were constructed against 571 in 1914-15, of which 273 were built for schools under municipal and local board managements and as many as 229 were for aided schools under non-mission management. The expenditure rose from Rs. 53·17 lakhs to Rs. 54·99 lakhs, to which public funds contributed 72 per cent, fees 13 per cent, and subscriptions and other sources 15 per cent. The average cost per pupil was Rs. 4-10-8 against Rs. 4-12-1. Each pupil in Government schools (which are mostly in Agency tracts) cost Rs. 13 2-10, in board schools Rs. 6-4-3, and in aided schools Rs. 4-0-1. Fees met 3 per cent of the expenditure in Government schools, 4 per cent in board schools, and 18 per cent in aided schools.

Special education.

412. There was an increase in the number and strength of schools for special education, owing to the inclusion of statistics relating to industrial and medical schools.

Training schools.

413. The temporary higher elementary training school at Amalāpuram and the extra higher elementary training class at Nellore were closed. Owing to the abolition of one training school, the Lutheran Mission School at Nayudupet, Nellore, there were this year 55 training schools for masters ; the combined strength fell from 3,979 to 3,526. There were 24 training schools for mistresses and the numbers at the 23 non-European schools advanced from 646 to 745.

Technical and Industrial schools.

414. The School of Arts, Madras, the School of Commerce, Calicut, the Reformatory School, Chingleput, and the Art Class, Kumbakōnam, worked well. All the four institutions had a larger number on the rolls and showed better attendance than in the previous year. 5,313 students were receiving education of a technical character, of whom 1,627 were pursuing art education, 956 technical education dealing with engineering subjects and telegraphy, 1,546 industrial education and 1,184 commercial education

There was a decrease in the number of students receiving commercial education due to the inclusion of commercial subjects in the list of optional subjects for the secondary school final course. Thirty-eight recognized industrial schools with 1,922 pupils were under the control of the Department of Industries ; the bulk of the schools were carpentry and lace schools, but there were three weaving schools, including the one for blind boys.

Female education.

415. The strength of the three colleges for women rose from 65 to 98, of whom 43 were reading in the Government College for Women, Madras ; this institution amply justified the expectations formed of it and the staff was further strengthened with a view to its being affiliated to the B.A. Pass course. At the last Intermediate Examination in Arts the results were excellent, and 11 students of the college were successful including three in the first class, out of 13 who appeared. The Women's Christian College, Madras, is of the first grade having been affiliated to the University in groups IV and V of the B.A. Degree courses ; it also obtained considerable success in the Intermediate examination. For non-European girls 127 new schools were opened, of which 111 were public institutions ; 16,500 more girls went to school than in the previous year. The number of girls in non-European public secondary schools rose from 7,281 to 7,837 and of those in the secondary stage 14·2 and ·2 per cent were Brahman and Muhammadan girls. In the elementary schools for girls 5,147 teachers were employed, of whom about 58 per cent were trained, the percentage being highest (76) in the City of Madras and lowest (36) in the Malabar district. Expenditure rose from Rs. 12·25 lakhs to Rs. 12·75 lakhs, towards which public funds contributed Rs. 7·99 lakhs, or 63 per cent, and fees Rs. ·83 lakh, or 6 per cent.

European education.

416. The St. George's Homes, Kodaikānal, were recognized under the Code of Regulations for European Schools. The St. John Primary Schools for Girls, Vellore, and the School of Music, Madras, were closed and the Presentation Convent Primary School, Georgetown, Madras, was amalgamated with the St. Mark's Orphanage in the same locality. Including two schools for special education, there were 87 schools intended for Europeans and the number receiving instruction rose from 8,080 to 8,325 ; of the 635 teachers, 446 held professional certificates and only 54 held no certificates at all. The accommodation and equipment continued to improve. The percentage of passes in the European school examinations improved in the case of boys, but it declined in the case of girls ; the failures were mainly in English. Expenditure in European institutions fell from Rs. 14·43 lakhs to Rs. 13·70 lakhs.

Education of Muhammadans.

417. The institutions chiefly intended for Muhammadans rose from 2,535 to 2,719 and their strength from 130,525 to 141,911. The five secondary schools received a substantial accession to their strength, but public elementary schools for boys as well as for girls chiefly contributed to the general advance. In arts colleges there were 186 Muhammadan students and the number of Muhammadan pupils in secondary schools advanced from 6,769 to 6,950. The percentage of Muhammadans in all classes of institutions to the Muhammadan population of school age rose from 42·4 to 44·5. In the training schools for Muhammadan masters the strength rose from 263 to 305, which was a matter for satisfaction in view of the difficulty in satisfactorily staffing Muhammadan schools. Secondary school-leaving certificates were awarded to 184 Muhammadans and 115 others passed through the supplementary course. The one Muhammadan who appeared for the Matriculation examination failed and at the Intermediate Examination in Arts 24 Muhammadans passed out of 118 candidates. The three Muhammadans who appeared for the B.A. (Honours) Degree examination —Preliminary—passed. The expenditure on Muhammadan and Mappilla schools rose from Rs. 6·87 lakhs to Rs. 7·40 lakhs, towards which public funds contributed 73 per cent and fees 10 per cent.

Education of Panchamas.

418. The number of institutions intended for Panchamas rose by 530 and the strength by 15,000, the increase being confined almost entirely to

public elementary schools for boys. There were four secondary schools with 345 pupils against two with 282 pupils previously. 114,072 Panchamas were under instruction, which represented an advance of about 9 per cent.

Aboriginal and Hill Tribes.

419. Ten more schools intended for these tribes were at work in the Agency tracts of the Vizagapatam district, but the number remained stationary in the Ganjām and Gōdāvari districts. In the Presidency as a whole pupils belonging to the aboriginal classes were 6,257 and in the three Agencies alone the number was 4,654.

Education of the blind and of deaf mutes.

420. The boys' and girls' schools for the blind at Palamcottah continued to do good work ; in the former six pupils passed the elementary and two the intermediate examination in cotton weaving. The strength of the Deaf and Dumb school at Mylapore was 25 at the close of the past year (10 boys and 15 girls). The South Indian Blind School in Madras and the Blind School at Rentachintala continued to do useful work.

Private institutions.

421. Private schools decreased by 2·96 per cent in number and 1·5 per cent in strength ; the fall in the former case was contributed both by secondary and elementary schools for boys and in the latter case was confined to elementary schools for boys.

REFORMATORY SCHOOL, CHINGLEPUT. (1915.)

[*Statistics of British India, Part VI, Administrative and Judicial—Jails.*]

422. The strength of the school rose from 247 to 250 including 11 boys who were allowed out on license ; there were 64 new admissions and 58 boys were removed. The newly admitted boys were drawn from every district except Cuddapah, Kurnool, Gōdāvari and Salem ; 40 came from Tamil and 16 from Telugu districts and 8 from Malabar. Two-thirds were casual or first offenders and the remaining 22 were habituals, of whom 15 were sent after one previous conviction, 6 after two and 1 after four previous convictions. Thirteen applications received from respectable parents for the admission of their children were refused as the children had not been convicted of any offence. The Brahman class which previously contributed an occasional pupil once in three or four years increased from 2 to 7 which was a record figure ; the non-Brahman Caste Hindus numbered 120 and formed half the population of the school. Of the pupils 69 were admitted into the school for theft and may be classed among neglected or destitute children who committed the offence as the result of their youth ; the others were committed for more serious offences indicative of criminal tendencies, and this class was slightly on the increase. A band-practising room, a mosque, a reading-room, and a few minor improvements were completed. The health of the school was better although malaria could not be driven out ; the percentage of boys with enlarged spleen was reduced from 47·9 to 9·3. The usual record of physical development was maintained and there was a satisfactory increase in the number of those who put on weight. Conduct was satisfactory and there were only three attempts at escape which all failed ; 10 boys only were birched and 225 boys received no punishment at all. The mark system with money rewards helped to maintain discipline ; the earnings for the year were Rs. 1,076-14-6 and each pupil earned on an average Rs. 4-3-7. For physical training the school was divided into four sections and regular battalion exercises were gone through once a week. Gymnastics, physical culture and Swedish drill received regular attention, the latter especially helping towards the physical improvement of the less robust boys ; the success of the system attracted the heads of other institutions also, and they began to send their teachers to the school for training. The carpentry, blacksmith and metal work classes were conducted in a satisfactory manner ; some of the more able pupils were sent to firms where

they could get more advanced training than in the school. The net profit earned by industries was Rs. 2,248. Thirty-two candidates in all appeared for the Government Technical examinations and 29 passed with 9 in the first class ; the percentage of passes was 90·6 against 84 in the previous year and constituted a record. Of the pupils discharged in the year 70 per cent were reported to be well employed and 60 per cent were following their trades. The expenditure deducting sale-proceeds was Rs. 39,038-15-4, which was slightly less than the previous year.

MISCELLANEOUS. (1915-16.)

Government examinations.

423. A special examination under the Secondary School-Leaving Certificate Board for the benefit of teachers who had failed in the Matriculation and were desirous of being admitted for secondary grade training was instituted. It was held at fifty-three centres ; 82 candidates (including two females) registered their names, of whom 81 appeared, and four male candidates qualified for admission to a secondary training school. The total number of individual candidates registered for the three grades of Technical examinations was 11,377. The total number of subject-candidates examined was 13,883, of whom 6,072 were successful. There was an increase in the number of candidates under " examined " in the case of the elementary grade, but there was a decrease in the percentage of passes ; the results, however, were better than those of the previous year in the intermediate and advanced grades. Ninety-four candidates appeared for the competitive examination for the Civil Medical Pupil grade, for which forty vacancies were thrown open to competition. All the applicants were holders of secondary school-leaving certificates. For the Special Tests 4,079 candidates in all registered their names ; 3,303 presented themselves for examination and 1,180 passed. These figures show a decrease on last year, but the results were on the whole better ; the lowest percentage was in the Account Test. The receipts amounted to Rs. 1,27,603 and the expenditure was Rs. 1,57,281.

Technical examinations.

Subordinate Medical Department.

Special Test examinations.

Finance.

Lawrence Memorial School. (1915.)

424. On the 31st December 1915, there were 446 pupils on the rolls of the school, 283 boys and 163 girls, of whom 8 boys and 7 girls were day scholars. This was considerably less than the average during the year owing to the fact that in November and December 8 boys enlisted in the British Army and 11 entered the Telegraph Department and the vacancies were not filled till the beginning of the next school year. There were 247 children awaiting admission (121 boys and 126 girls), of whom 83 boys and 93 girls were the children of the British soldiers serving or having served in India. Of the boys who left during the year 17 went to England, 19 entered the Government Telegraph Department and 9 enlisted ; of the girls, 4 joined the Women's College, Madras, with Dufferin's Fund scholarships and 3 joined the hospitals to be trained as nurses.

Strength.

Education.

425. In the Government Examinations for European schools held in November 1914, 2 boys and 6 girls passed the High School examination, and 5 boys and 6 girls passed the Middle School examination, 1 boy and 1 girl gaining a Government scholarship. In the examination held in November 1915, 2 boys and 4 girls passed the High School and 4 boys and 1 girl the Middle School examinations. Twenty probationers entered the Telegraph Department in the year. Typewriting and drawing were taught in both schools, and cooking and dress-making in the girls' school. A carpentry shop has been sanctioned. Drill and gymnastics were carried on regularly ; in the Grigg Memorial sports the school secured the medal for the best all round athlete on the Nilgiris, and won three out of the four challenge cups open to European schools ; there were 133 members of staff and pupils in the Nilgiri Volunteer Rifles. The Principal heard from 85 old boys now serving at the front. The general health was good except for an outbreak of mumps in July ; there were no deaths. The total receipts were Rs. 2,94,419 and the expenditure was Rs. 2,31,386 ;

Health.

Finance.

Rs. 23,868 were received in fees. The average cost of a boy and a girl was Rs. 380 and Rs. 341, showing an increase for a boy and a decrease for a girl compared with 1914.

School of Arts, Madras.

426. The number of pupils on the rolls on the 31st March 1916 was 283, of whom 32 were females, and the average attendance during the year was 201. The figures for 1914–15 were 252 on the rolls, average attendance 171. The figures of the average attendance, month by month, show that beginning with the reopening of the school in July, the strength gradually increases up to November when the yearly Government Technical Examination in drawing takes place ; they then fall off considerably. The effect of the new distribution of holidays, which now more nearly coincide with those of other schools, was probably the cause of the improvement in attendance. The most popular departments continued to be the engraving and lacquer work (decorative painting) and woodwork departments. The Government scholarships were increased by thirty during the year, there being now 93 scholarship-holders. The most important work in point of size and value executed during the year was the making of doors for the new palace at Pudukkōttai. This was completed. The sales showed a considerable falling off from the previous year but were larger by a small amount than in 1913–14. Pictures, metalwork and various articles of artistic merit were added to the collection. The articles purchased were of great assistance in various departments, being used as models for design and workmanship. In the Government Technical Examinations 169 appeared and 130 passed as against 152 and 115 in 1914–15. The results are improving yearly. Eight appeared successfully for the Technical Teachers' Certificate. During the autumn and Christmas holidays the exhibition at the People's Park occupied a great deal of the attention of the school.

LITERARY SOCIETIES.

427. *Vide* pages 239 to 241 of the Report on the Administration of the Madras Presidency during the year 1911–12.

LITERATURE AND THE PRESS. (1915–16.)

[*Statistics of British India, Part VII—Educational.*]

Public Libraries.

The Connemara Public Library.

The University Library.

The Oriental Manuscripts Library.

428. The total number of readers was 20,581 against 20,412 in 1914-15. Five hundred standard works were added to the library of which 465 were purchased and the rest presented. The fifth supplement to the Library Catalogue of books under authors' names (comprising accessions from the 1st April 1912 to 31st March 1915) was published during the year. Dictionaries and encyclopædias and historical works were the books most commonly asked for. The total number of readers was 6,456 against 3,046 in 1914–15, and 9,076 volumes were consulted as against 4,204 in the previous year. The privilege of taking books on loan from the library against a deposit of Rs. 20 was increasing in popularity and was claimed by 91 University readers as against 36 in 1914–15. Manuscript slips for a supplementary catalogue of books under authors' names were prepared and were in the press. With a view to improving the system under which oriental manuscripts have been acquired for the library, at the end of the year 1914–15 a peripatetic search party was organized for acquiring such manuscripts in a systematic manner. This touring party visited during the year 1915–16 about 280 private libraries and examined nearly 18,800 manuscripts of which about 1,830 were marked noteworthy. The number of manuscripts acquired by transcription during the year, namely 233, was the largest on record ; this was due to the fact that the greater number were available for transcription only and not for exhibition. The visitors to the library increased from 1,397 to 2,062 as also the number of manuscripts consulted by them, viz., from

2,703 to 3,810. As usual, religion and poetry formed the most popular subjects for consultation.

Periodicals. (1915.)

429. The beginning of the war gave a great impetus to newspaper publishers, and the number of papers leapt at a bound from 117 to 212. As the war continued, however, it became more and more difficult to elude the censors and to find sensational news to arouse the flagging interest of the readers and thirty-seven papers soon ceased to exist. The scarcity of money on the West Coast was held to be more responsible for the falling off in the circulation of the local papers than any declining interest in the war. The well established English and vernacular papers also failed to maintain their high circulation, that of the *Swadesamitran* falling from 9,500 to 5,600. With one conspicuous exception, *New India*, the tone of the local journals was generally satisfactory and their attitude towards the war entirely commendable. If the press can be taken as the mouthpiece of its readers, the people of the Presidency realise truly how much depends on the ultimate success of the Allies. In particular, the articles on the war in the *Hindu* showed a remarkable grasp of the situation which was certainly not surpassed by any of its contemporaries. *New India*, the paper which returned the largest circulation, showed marked hostility to the Government, to the "bureaucracy", to the Anglo-Indian community and to Christian missionaries. Outside Madras City there was little occasion to enforce the Press Act at all ; infringements of the Act were usually due to ignorance or oversight. One newspaper did not start publication, and one ceased publication owing to the demand of security. The editors of eighteen papers were warned for publishing indiscreet or alarming articles about the war. Five presses did not open when required to deposit security for their future good conduct in print.

Registration of books. (1915.)

430. Notwithstanding the effects of the war printing and publishing activity continued to be steady ; 2,462 books and 1,818 periodicals were registered, a decrease of less than 5 per cent on the publications of 1914. Books published in the vernacular formed two-thirds of the total publications ; 698 were published in English and other European languages and 124 in Indian classical languages. The language distribution was the same as in the past ; three languages—German, Badaga and Tulu—were not represented, but Marathi found a place in this year's table. "Sangita Jayanta Jayapal" in Hindi was a publication worthy of note. Religion continued to be the subject most largely taken up. There was naturally a marked increase in the number of publications dealing with the present war in Europe. There were eleven books dealing with Politics as against three in the previous year, but none of them seem to have been objectionable in character. One of the best books of the year was Udyana Krishi, a Telugu hand-book on gardening, which combined the accumulated experience of Indian methods of agriculture with the more scientific western ideas. A book which had a ready sale was the War and the British Raj, a book dealing with the various features of the war in simple language. The number of periodicals fell from 1,885 in the previous year to 1,818. There was a steady expansion in the production of popular vernacular prose literature and a larger proportion of works could lay claim to originality. As many as 377 works, or a little more than 12 per cent of the total, seem to have been designed for educational purposes against 466 in the previous year. The moral tone of the publications registered was on the whole satisfactory.

ARTS AND SCIENCES. (1915-16.)

Government Museum. Visitors.

431. The number of visitors to the Museum during the year was 804,431. The figure is still a long way below the figure for 1913-14, though it shows a larger attendance than in last year. As usual Kannu Pongal (16th January) was the most popular day for visiting the Museum.

Buildings.

432. The detailed plans and estimate for the proposed extension on the southern side of the new building were ready. The need for extra accommodation was becoming increasingly evident ; in more than one section of the Museum considerable difficulty was experienced in finding room for recent accessions and a continual rearrangement of earlier exhibits was thereby rendered necessary. The overcrowding was nowhere more apparent than in the Natural History section, and with the space at present available little more could be done than to add sparingly to the general collections. It was found necessary to discontinue exhibits showing South Indian animals in their natural surroundings, for lack of room.

Reptile gallery.

433. A case containing a collection of South Indian frogs, toads and cæcilians was placed in the Reptile gallery and it was largely added to in the course of the year.

South Indian insects.

434. A collection to illustrate the more important types of South Indian insects is under arrangement in the Arthropod room and will be added to gradually as specimens become available.

Marine Aquarium.

435. The total number of visitors during the year under review and the amount realized in entrance fees were 105,670 and Rs. 3,769 against 90,623 and Rs. 3,309 in the previous year. The general health of the fish continued to be good.

Meteorology.

436. The observatory on Dodabetta was closed in September last. The construction of the shed for the proposed observatory at Koraput in the Vizagapatam district has been completed and observations will begin during the current year. The usual annual repairs to thermometer sheds, etc., were executed at 13 stations in the Presidency. There was no change in the personnel of the Madras Meteorological Office. Its chief work continued to be the publication of the Madras daily weather report and the rainfall returns of the Presidency. Rainfall returns were received from 499 stations ; 19 new stations were established in Travancore and 3 in British India. The expenditure in the Meteorological Office was Rs. 6,874–7–4, and on observatories in the Presidency Rs. 4,280–10–8.

Astronomy. (1915.)

437. At Kodaikānal the record of solar activity was maintained on the same general lines as in former years. Direct photographs of the sun on a scale of 8 inches to the diameter were obtained on 163 days up to June 19, when the photoheliograph was dismounted as the optical parts were required for an astronomical expedition to Kashmir. Spectroheliograms of the disc in calcium light were obtained on 325 days, of prominences on 284 days, and of the disc in hydrogen light on 208 days. There was again a marked increase in solar activity in accordance with the usual progress of a new sunspot cycle. The number of new groups of sunspots observed during the year was 198 as compared with 71 in 1914, and the mean daily area of prominences rose from 3·10 square minutes in 1914 to 5·28 square minutes in 1915. Research work with the grating spectrograph was largely devoted to the study of the displacement of lines in the solar spectrum compared with terrestrial spectra, and of the changes of displacement in passing along a radius of the sun's disc. Investigations were also made of the radial motion in sunspots, of the rate of rotation of the sun, and of the displacements in different portions of the electric arc. A continuous registration of earthquake disturbances was made with a Milne seismometer and 72 earthquakes were recorded during the year. Magnetic observations, both continuous photographic records and absolute eye observations, were made throughout the year by the Survey of India under the general supervision of the Director of the Observatory. At Madras the only astronomical observations made are those necessary for the maintenance of an accurate time service for the whole of India. The time gun at the Fort was fired correctly on 708 occasions out of 730 giving a percentage of success of 97 ; none of the 22 failures were due to faults at the Observatory. The semaphore at the Port Office was dropped correctly at 1 p.m. on every day except five.

CHAPTER VIII.

ARCHÆOLOGY. (1915–16.)

[*Annual Report of the Archæological Department, Southern Circle, Madras, for the year 1915–16 (G.Os. No. 109, Home (Miscellaneous), dated 5th September 1916, and No. 99, Home (Miscellaneous), dated 29th August 1916).*]

Archæology.

438. A sum of Rs. 1,000 was allotted in the budget for excavation works, but no works of this nature were taken up in order to leave more time for the preservation of existing monuments. Rs. 35,000 were sanctioned for conservation works and Rs. 29,700 were spent. Rs. 4,572 were spent on various repairs to the ruins at Hampi in the Bellary district, where the repairs to the most important buildings are now completed; Rs. 1,942 were spent on other works in the same district, Rs. 3,488 on works in Tanjore, Rs. 3,528 on repairs to the tomb of Abdul Wahab Khan at Kurnool, and Rs. 2,517 on repairs to the Gingee fortress in South Arcot, which is now the most important work on hand. In all 113 works of maintenance and repairs were carried out. Nine cases of treasure trove were reported for opinion as to the desirability of Government acquiring the treasure under the Act, and some valuable metal images were thus acquired for museum purposes. The plans and section for the Mahendragiri temples and a site-plan of the Srisailam temples in the Kurnool district represent the drawings prepared. Photographic work has greatly increased during the last few years; 20 applications for photographs were received from the public and 479 photo-prints were supplied. The revised list of ancient monuments was completed and was ready for the press. The cost of the department was Rs. 19,740.

Epigraphy.

439. In the year under review 450 villages were inspected and 835 stone inscriptions and seven copper plate records were examined and transcribed. The Adōni taluk of the Bellary district and the Narasaraopēt taluk of the Guntūr district were completely surveyed for inscriptions. An Andhra inscription of the time of Pulumāvi II at Myākadoni in the Adōni taluk of the Bellary district, a Pallava temple and inscription at Panamalai in the South Arcot district and a set of early Pallava copper plates of about sixth century A.D. from the Guntūr district formed the chief discoveries. Other interesting discoveries were a sculptured pillar on the top of the so-called Telegraph Hill at Bezwada which bears a record of about the ninth century A.D. (written from bottom to top) and supports the tradition that Bezwada was the spot at which the legendary combat between the epic hero Arjuna and God Siva is believed to have occurred; and a big Tamil record of the time of the Chōla king Vīrarājēndradēva of the eleventh century A.D., which brings to light the existence of a school for the study of the Vēdas, Sāstras, Grammar, Rūpāvatāra, etc., a hostel for students and a hospital which provided beds for fifteen in-patients, in the temple of Vishnu at Tirumukkūdal in the Chingleput district. Diwan Bahadur L. D. Swamikannu Pillai completed his Ephemeris and deposited his voluminous work in the office of the Epigraphist for reference.

CHAPTER IX.

MISCELLANEOUS.

ECCLESIASTICAL JURISDICTION.

440. *Vide* pages 244 to 246 of the Report on the Administration of the Madras Presidency during the year 1911–12.

ECCLESIASTICAL. (1915–16.)

Church of England.

441. The Reverend Edward Harry Mansfield Waller, M.A., was consecrated Bishop in Tinnevelly and Madura in the Cathedral Church of St. Paul, Calcutta, on the 28th November 1915 by the Most Reverend the Metropolitan of India and Ceylon assisted by seven other Bishops of the Province. The Bishop of Madras subsequently issued a commission to Bishop Waller in terms similar to the terms of the commissions issued to Bishop Morley and the late Bishop Williams. The Bishop of the Diocese was summoned by the Most Reverend the Metropolitan to Calcutta in November 1915 on provincial business. Owing to the retirement of one senior chaplain there was a vacancy on the establishment. The services of two chaplains were placed at the disposal of the Government of India in the Army Department for active service. At the end of the year there were in all 280 clerks in Holy Orders officiating under the licenses of the Bishop of Madras and the Bishop in Tinnevelly and Madura. Seven clergymen were licensed to officiate in the Diocese of Madras and one clergyman was licensed to officiate in the Diocese of Tinnevelly and Madura. The alms and other devotions of the people offered through clergymen ministering to English congregations during the year amounted to Rs. 1,45,930–7–9.

Voluntary contributions.

Church of Scotland.

442. At the close of the year, the permanent Presidency Senior Chaplain went on leave, and the establishment of the Church of Scotland consequently consisted of three chaplains as against four in the previous year, namely, the Senior Chaplain of the St. Andrew's Church, Bangalore (who acted as the Presidency Senior Chaplain), and the Junior Chaplains at St. Andrew's Churches at Secunderabad and Madras.

STATIONERY. (1915–16.)

443. The value of the stock with the Superintendent of Stationery at the beginning of the year 1915–16 was Rs. 9,28,120 (English stores Rs. 6,21,676 and Indian stores Rs. 3,06,444) against Rs. 9,23,593 (English stores Rs. 6,94,156 and Indian stores Rs. 2,29,437) in 1914–15. The value of stores received during the year amounted to Rs. 8,16,485 (English stores Rs. 3,23,950 and Indian stores Rs. 4,92,535). The total value of issues amounted to Rs. 9,36,042 (English stores 4,18,962 and Indian stores Rs. 5,17,080) against Rs. 9,56,079 in 1914–15. The value of stationery debited to Local Funds, etc., and of stationery issued on payment amounted to Rs. 19,079 against Rs. 21,527 in 1914–15. The value of the closing balance of stores for the year was Rs. 8,08,563.

THE GOVERNMENT PRESS. (1915-16.)

Finance. 444. The total receipts amounted to Rs. 81,243 against Rs. 87,049 last year showing a decrease of Rs. 5,806 in the aggregate, but excluding unusual receipts in the previous year there was an increase this year of Rs. 7,800 chiefly under recoveries for the cost of printing, binding and paper. The expenditure exceeded that of the previous year by Rs. 47,498, due to the rise in prices of stores and plant and to the debit to the Government Press of the railway freight on forms despatched to other offices. There were no abnormal fluctuations in cost or outturn.

Publications. 445. The sales of Acts and books amounted to Rs. 21,776 against Rs. 21,455 in 1914–15, but the realization by commission agents was practically the same as last year. Acts and books of the value of Rs. 56,453 were issued free against Rs. 75,095 in the previous year, the decrease being due to the supply of less expensive publications.

Printing and binding. 446. The total of standard pages printed during the year was 296,391 against 294,053 in the previous year and the cost per page was As. 14-2 at the Central Press, Rs. 1-2-6 at Mount Road, Rs. 2-5-5 at the Penitentiary and Rs. 1-8-2 at Ootacamund, or an average of As. 15-6 for the Madras Presses, which was ten pies lower than in the previous year. The number of impressions was 148,705,718 against 180,298,417 in 1914–15 and the largest decrease was nearly 22 millions at the Penitentiary owing to transfer of work to other presses for lack of suitable convicts for press work. The remaining difference was caused by small requisitions for forms and non-receipt of some indents on due dates. The cost per 1,000 impressions decreased in the Ootacamund Branch and the general average per unit for Madras was As. 11-2. The total debit against binding for all the presses amounted to Rs. 1,28,920 against Rs. 1,14,086 in the preceding year and the increased expenditure was due largely to enhanced prices paid for binding materials.

Miscellaneous. 447. The output of the foundry consisted of 67,203 lb. of type and 15,445 lb. of stereos and electros besides punches and matrices, and the expenditure was Rs. 48,027 against Rs. 48,469 in 1914–15. The cost of rubber stamps, pads, etc., supplied during the year was Rs. 2,990 or less than last year by 15 per cent. There was a reduction of 17 millions in the number of forms and covers indented for. This showed a satisfactory decrease, but the total was still at the enormous figure of 205 millions.

THE CHEMICAL EXAMINER'S DEPARTMENT. (1915.)

[*G.O. No. 837, Public, dated 1st May 1916; Statistics of British India, Part VI, Administrative and Judicial—Medico-legal Investigations.*]

General. 448. The amount of work done during the year showed practically no difference from that done in 1914.

Medico-legal investigations. 449. There were 194 cases of suspected human poisoning. The percentage of detections was 46·9 against 52·7 in 1914. The principal poisons detected in their order of frequency were arsenic, mercury and atrophine; there was a considerable decrease in the number of cases in which aconitine was detected. An instance of perforation of the stomach from arsenical poisoning was noticed.

Human poisoning.

Animal poisoning. 450. There were 102 cases of animal poisoning, and 61 animals were reported to have been killed. The percentage of detections was 71·5. Arsenic continued to be by far the most common form of poison used.

Stains. 451. 267 cases were investigated for blood or seminal stains, and 1,074 articles were examined; the percentage of detections was 78·6. 545 specimens of stains concerned in 201 cases were sent to the Imperial Serologist. Of these specimens, 485 were found to be due to human blood.

CHARITABLE INSTITUTIONS. (1915–16.)

General.

452. Excluding dispensaries, there were 3,071 charitable institutions in the Presidency with an income of 15·59 lakhs of rupees, 92 garces of paddy and 26 muras of rice. Of these institutions 2,024 were maintained entirely by means of subscriptions and donations from the general public and endowments in land and money, the total receipts from all these sources amounting to 8·15 lakhs of rupees. 365 institutions were supported by Government at a cost of 1·59 lakhs of rupees and 104 were maintained at a cost of 2·29 lakhs of rupees partly by Government and partly by the public; the maintenance of the remaining 587 institutions, costing about Rs. 3·56 lakhs, devolved wholly or in part on local bodies. The funds of the institutions were devoted to various objects. There were 1,965 institutions intended to provide travellers with accommodation and in many cases with cooked food or raw rice, and other supplies. Of these, 1,153 were exclusively for Hindus, 44 for Muhammadans, 5 for Europeans and Eurasians, and the remaining 763 were not restricted to any particular class. For the relief of paupers 436 institutions were maintained, of which 341 were restricted to Hindus, 11 to Muhammadans and 5 to Europeans and Eurasians, and the remaining 79 were open to members of all classes and creeds. There were 593 institutions for the exclusive feeding and accommodation of Brahmans and Byragis (Hindu devotees). The total number of persons aided during the year at all the charitable institutions was 12,236,815 and the average daily number in receipt of relief was 43,132, or about one in every thousand of the population.

Monegar Choultry, etc. (1915.)

453. The Directors of the Monegar Choultry control three institutions—the Monegar Choultry, Foundling Asylum and Native Infirmary; the Raja Sir Savalai Ramaswami Mudaliyar's Maternity Hospital; and the Raja of Venkatagiri's Choultry. In the first institution the daily attendance was 58·41, a decrease of 20 compared with the previous year, which resulted in an increase of the balance at the bank; Rs. 19,618 were received and the expenditure amounted to Rs. 17,219. There was no expenditure under the Foundling Asylum; the expenditure on the choultry, chronic wards and native infirmary was Rs. 7,396, Rs. 2,527 and Rs. 6,345, respectively. The upkeep of the Lying-in Hospital has been taken over by the Madras Corporation since 1908. The annual expenditure was Rs. 2,938, but the income from the endowment only amounted to Rs. 1,988, the balance being paid from the surplus of the Monegar Choultry account.

Raja of Venkatagiri's Choultry.

The Raja of Venkatagiri's Choultry has no separate staff, but a fixed proportion of the cost of the general establishment of the Monegar Choultry is debited to this head. The daily average of in-door paupers was 24 and of out-door paupers (receiving $\frac{3}{4}$ lb. of raw rice daily) 106. The number of in-door paupers showed an increase, although it is the intention of the management, in view of the financial circumstances of the choultry, eventually to reduce the numbers to 20 and 90; this can only be done gradually. Eleven applicants for out-door relief who were recommended by the Directors had to be refused during the year. The receipts were Rs. 5,215 and the expenditure amounted to Rs. 5,948, but there was, however, available from the funds a balance of Rs. 2,124 with which to start the next year.

Triplicane Langerkhana.

454. The receipts of the Triplicane Langerkhana, including an opening balance of Rs. 593–9–7, amounted to Rs. 5,577–1–7. The daily average number of paupers who received help from the institution was 189 as compared with 176 in the preceding year. There were two female Mussalman paupers in receipt of money doles at an expenditure of Rs. 48, the figures being the same as those of last year.

MUHAMMADANS IN THE SERVICE OF GOVERNMENT. (1915-16.)

455. On 1st April 1916, there were 8,565 Muhammadans employed in the superior service of Government. The number employed in the previous year was 8,238, so that there was an appreciable increase to be recorded. 660 Muhammadans were admitted into service, the greater number as usual enlisting in the police force; only 4 joined the Forest Department, and 23 entered service under courts of law, 19 as third-grade amins. Of the total number employed 9 held posts with an annual salary of Rs. 5,000 and above, 40 drew from Rs. 2,500 to Rs. 5,000, 101 Rs. 1,000 to Rs. 2,500, 280 Rs. 500 to Rs. 1,000, 347 Rs. 250 to Rs. 500, 1,981 Rs. 120 to Rs. 250, and 5,807 Rs. 120 and less. Although the percentage of Muhammadans to the total population of the Presidency was only 6·6, Muhammadans occupied nearly 25 per cent of the number of posts in the lowest grade, and 11 per cent in the next grade above. Excluding the lower grades the percentage of Muhammadans in other posts stood at 5·3. There were 6,961 Muhammadans employed in the Police Department, 530 under Law and Justice, 264 in the Land Revenue and 206 in the Educational Department. In no other department were more than 200 Muhammadans employed.

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